HOME OFFICE

STUDIES IN THE CAUSES OF DELINQUENCY
AND THE TREATMENT OF OFFENDERS

I

PREDICTION METHODS
IN RELATION TO BORSTAL TRAINING

BY

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With a Foreword by
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FOREWORD

by SIR FRANK NEWSAM, K.C.B., K.B.E., C.V.O., M.C.,
Permanent Under-Secretary of State for the Home Department

THE Home Office has long been conscious of the need for research into various aspects of delinquency, and by section 77 (1) (b) of the Criminal Justice Act, 1948, authority was given for the first time to the Secretary of State to incur expenditure "in the conduct of research into the causes of delinquency and the treatment of offenders, and matters connected therewith".

Under these powers a modest beginning has been made on a number of research projects with the limited amount of public moneys which in present circumstances can be made available for this purpose.

The results of one of the projects approved by the Secretary of State are set out in this volume. This project has involved studying the previous records and subsequent careers of 700 of the boys who were sentenced to Borstal training in the twelve months beginning 1st August, 1946. It was hoped that the inquiry would throw light on the value in this country of "prediction" or "experience" tables, on which a good deal of work has been done in the U.S.A. and in Europe. But the Secretary of State had in view more than a contribution to pure science. He hoped that such an inquiry might show how far prediction tables could be of practical value in administration; for example, in suggesting what was of real significance in the information recorded in offenders' personal records, or in serving as an additional guide to those who, on behalf of the Prison Commissioners, make reports to the courts as to the suitability of offenders for different types of sentence, or as a further help in classifying offenders after their conviction, making suitable provision for their training and considering their readiness for release. The report opens up interesting fields for speculation under these various heads and points the way to further relevant investigations.

Dr. Hermann Mannheim of the London School of Economics and Mr. Leslie Wilkins of the Social Survey Division of the Central Office of Information have made in this report a notable contribution to knowledge in this field, and have earned the thanks of persons interested in questions of delinquency, not only in this country but in many other countries also.

I should add that although the project was developed by the authors in consultation with a Home Office "steering committee", the Home Office is not in any way committed to the findings in the report and that the authors take full responsibility for the report and for its conclusions.

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AUTHORS' PREFACE

The preparation and writing of this report have, in many ways, been a remarkable experience to the authors. It has been a great privilege to be accorded the opportunity of conducting the first piece of criminological research to be published under the auspices of the Home Office in accordance with the powers given by the Criminal Justice Act, 1948, and we are much indebted to Sir Frank Newsam, Permanent Under-Secretary of State for the Home Department, for doing us the honour of contributing the Foreword. Moreover, we wish to place on record our appreciation of the generous assistance received in the course of our work from the Home Office and in particular from the Steering Committee and its Chairman, Sir Lionel Fox, Chairman of the Prison Commission for England and Wales. To him and to the other members, Mr. P. Allen, then Deputy Chairman of the Prison Commission, Mr. George Benson, M.P., and Mr. R. L. Bradley, Director of Borstal Administration, Mr. Frank Foster, Director of the Borstal Division of the Central After-Care Association, Mr. C. P. Hill, Assistant Secretary, Children's Department, Home Office, Mr. T. S. Lodge, Statistical Adviser, Home Office, Mr. F. J. MacRae, Principal Probation Inspector, Home Office we are sincerely grateful. We also express our thanks to Mr. H. C. P. McGregor, Secretary of the Committee, to Miss G. M. K. Beck, B.A., F.L.A., who assisted with the indexes to this book, and to the staffs of the Prison Commission and of the Government Social Survey for their unstinting co-operation, without which our research could not have been completed.

The close co-operation in this research of a criminologist and a social statistician, working as a team and constantly exchanging views on the details of the project, has been of the greatest value to both of us. Although co-operation between the two disciplines has been easy, it would be untrue to allow it to be thought that any integration of case study methods with the statistical approach has been completely worked out in this project. We feel, however, that we may now see the way towards such an integration, and have allowed ourselves to theorise at times about this.

No references have been made in the text of this book to Mr. A. G. Rose's work "Five Hundred Borstal Boys", which appeared only when our work was in galley. Mr. Rose's work was not, of course, a prediction study, although it contains much data comparable with that in our Chapter V. Our own printing was held back after the original study was completely written up so that a validation study could be carried out and included before publication (see Chapter VII). We have, however, been able to insert an Appendix commenting upon the findings of Mr. Rose in relation with our own work and from this it will be clear that the two methods of approach, indeed the two ways of thinking about the same problem, are completely different. We have preferred objective and repeatable methods whilst Mr. Rose followed the Glueks more closely and utilised subjective judgments. It is, however, in the method of analysis of the data that the main difference between Mr. Rose's work and ours will be found.

One thing clearly emerges, whether the subjective or the objective approach is preferred, little is known about optimum methods of treatment for offenders.

Many theories exist but few, if any, have been subjected to tests by evidence. Whilst we feel that we may have been able to contribute to methodology, we have been able to assess only two factors in treatment, namely, the Open and Closed systems of training and the effect of periods of detention in Borstal. We believe, also, that our methods have applications in many other fields both in criminology and other social sciences.

Finally, we must again say how much we appreciated the co-operation of the administration in this project, and add that we feel that advance in research in criminology needs the combined efforts of administrators and research disciplines.

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HERMANN MANNHEIM
LESLIE T. WILKINS

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London,
October, 1954

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CHAPTER I

Historical Survey of Prediction Studies in the Field of Criminology

I.1 The bulk of existing prediction studies in Criminology has been produced in the United States. The most important American studies will be discussed in Part I of this chapter, whereas Part II will deal with the work done in Europe.

PART I

AMERICAN PREDICTION STUDIES

I.2 These studies cover approximately 30 years and have been largely concerned with prediction of the future conduct of adult prisoners for the use of Boards of Parole, occasionally also with the future conduct of juvenile offenders discharged from Reformatories, and in a few cases with that of probationers.

I.3 It should be understood that, as a rule, only studies in which an attempt is made, by means of prediction tables, to predict future conduct, not mere follow-up studies without prediction tables [1], are included in this survey [2].

THE PRE-GLUECK PERIOD

I.4 Professor S. B. Warner's study [3], made at the invitation of Mr. Sanford Bates, then Commissioner of Correction of the State of Massachusetts, is usually regarded as the first of its kind. His paper, published in 1923, is interesting not on account of its positive findings, which were negligible, but because of the thought-provoking effect it had on subsequent workers. He selected 680 prisoners of the Massachusetts State Reformatory, 300 of them parole successes, another 300 parole violators and 80 not paroled, who had appeared before the Board of Parole mostly between 1912 and 1920, collected the information available in their files under 64 headings and compared his three groups with regard to these factors. He further considered the criteria used by the Board of Parole for determining whether or not to grant parole, namely: 1. whether a man had profited by his stay in the institution and so far reformed as to be unlikely to commit another offence; 2. his conduct in the institution; 3. whether suitable employment was awaiting him upon release; 4. whether he had a home or other proper surroundings to which to go; 5. a man's ability to tell the exact truth when interviewed by the Board; 6. the seriousness of his offence and the circumstances surrounding it; 7. his previous record in Court or otherwise; 8. the appearance which a man makes before the Board in applying for his parole; 9. behaviour on former parole.

I.5 As the next step, Warner tried to demonstrate that for most of the criteria used by the Board there appeared to be no foundation in the light of his comparative figures for parole violators and non-violators. The Board regarded, for example, the commission of a sexual crime as militating against

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release on parole (criterion 6), whereas actually two-thirds of paroled sex offenders proved successes against an overall success rate of only one half. On the other hand, prisoners committed for larceny and breaking, who were most readily paroled, had a violation rate of 57%. Another of Warner's criticisms referred to the fact that for most of the information on family background, nationality, residence, education, habits and circumstances at time of crime, i.e. approximately one half of the factors, the Board relied exclusively on the answers obtained from the prisoners themselves. In short, Warner concluded that none of the 64 factors on which information was available, with the only exception of the psychiatric report, showed any significance as a criterion of success or failure and that no considerable improvement was possible in this respect "without a complete change both in the methods of obtaining information for the Board and in the nature of the information obtained". The blame for the Board's failure to obtain better criteria for parole had, he thought, to be placed "upon the present undeveloped state of the science of criminology rather than upon either the Board of Parole or the Department of Correction".

1.6 Warner's conclusions were immediately attacked by Hornell Hart (4) as merely due to his failure to apply accurate statistical tests. He maintained that the Massachusetts Board of Parole "could greatly improve its parole results by proper utilisation of the information already at its disposal". Applying to Warner's figures the formulae and tables developed by Yule and Davenport, he showed that for at least 15 items "the contrast between violators and non-violators was greater than would be exceeded by chance once in one hundred times"; it was, therefore, statistically significant. For another 20 items the contrast, while not clearly established, was "very probably significant". These contrasts were concerned chiefly with regard to home environment, character of the prisoner himself and his physical conditions, "all consistent with other findings in criminology". Presenting a table of these factors where the probability that the observed contrast was due to chance was less than about one in 100, he showed that there was a considerable number of factors where prisoners failing in the favourable sub-class of the factor would have a very high chance of success on parole. Of equal importance was Hart's suggestion that all significant factors should be combined into a prognostic score for each prisoner. "To devise such a scoring system, the intercorrelation between the various items tabulated by Professor Warner, as well as their correlation with parole violations, would need to be studied, so as to work out the best possible weighting system for scoring the pertinent facts". Such a system, he argued, would not only enable the Board of Parole to make reliable forecasts as to the probability of parole violations, but could also be used by the Courts to determine the kind and length of the penalty.

1.7 It is a weakness of Hart's paper that he accepted the prisoners' own story when it suited him, but rejected it when it seemed to conflict with previous criminological findings. Moreover, he merely indicated the possibility of devising a weighted scoring system, but did not construct one.

1.8 The stage was now set for the first important prediction study, that of Professor Ernest W. Burgess of the University of Chicago. In the course of an investigation into "The Workings of the Indeterminate-Sentence Law and the Parole System in Illinois" (5) made jointly with Judge Andrew A. Bruce and Dean Albert J. Harno, he studied the factors making for success or failure on parole. On 21 such factors information was extracted from three groups of

1000 men each, paroled at least 2½ years previously from (a) the Illinois State Reformatory at Pontiac, (b) the Illinois Penitentiary at Joliet, and (c) the South Illinois Penitentiary at Menard, altogether for 3000 men. Each factor was divided into a number of categories, for example, type of offence into larceny, robbery, burglary, fraud and forgery, sex offences, murder and manslaughter, and all other offences. When the general rate of parole violation was compared with the rate for each of the factors, it was found that for certain categories the rate was higher and for others lower than the general rate. For example, while in the Joliet group the general rate of parole violation was 28·4%, it was 42·4% for offenders convicted of fraud or forgery, but for those convicted of murder or manslaughter only 9%; for those with no previous work record it was 44·4%, but for those with a record of regular work only 12·2%; and so on. "Do not these striking differences", asked Burgess, "which correspond with what we already know about the conditions that mould the life of the person, suggest that they be taken more seriously and objectively into account than previously? These factors have, of course, been considered, but in a common-sense way so that some one or two of them have been emphasised out of all proportion to their significance." [6]

1.9 The question now arose of how to make the differences in the rate of violation found for the various categories of each of the 21 factors usable for practical purposes. Burgess solved this problem by attributing to each factor an arbitrary weight of one point, so that a parolee whose violation rate for, say, 12 factors was found to be below the general rate for his institution was given 12 favourable points, whereas the factors for which his violation rate was above the general rate of violation were ignored. The individual cases were then scored and a table of "Expectancy Rates of Parole Violation and Non-Violation" was constructed for the various score classes which showed the Expectancy Rate of Violation for men having, for example, 16 to 21 favourable points to be 1·5%, for men with only 2 to 4 favourable points, however, 76·0%.[7] Burgess cautiously regarded this table as merely illustrative of the possibilities of the method and not in any sense as in a form adapted for immediate use." "Indeed", he wrote, "the method needs to be still further refined and then applied to from 3000 to 5000 cases for each institution in order to obtain an adequate statistical basis for the accurate working of satisfactory expectancy tables." He also uttered the warning—repeated by every serious research worker after him—that, although statistical prediction had now become feasible, no exclusive reliance should be placed on it at the expense of the more intensive study of the individual case.

1.10 As will be shown below, the Burgess method has since become one of the two most widely used techniques in criminological prediction. It has, however, also been criticised on the following grounds, conveniently summarised by Vold[8]:

(a) Only the material contained in official records was used.

(b) Only conduct during the official period of parole was considered.

(c) Some of the categories used to differentiate between violators and non-violators were overlapping and too subjective. This applies in particular to Burgess's category "social type" which was divided into subclasses such as "hobo", "ne'er-do-well", "mean citizen", "gangster", etc.

(d) There was no check upon the reliability or consistency of the findings by reclassification or similar tests.

(e) A system of scoring was used that assigned equal weight to every one of the 21 factors, whereas it was evident from the tables produced that certain factors were more strongly correlated to success or failure than others.

1.11 Different weight has to be given to these various criticisms. Whereas those under (a) and (b) question the completeness and reliability of the factual material used as the basis of the statistical work, the others are criticisms of the statistical techniques employed.

THE GLUECK STUDIES

1.12 (a) Almost simultaneously with the Burgess study, the first large-scale piece of follow-up and prediction research in the long series of the Glueck studies was completed: "500 Criminal Careers." [9] As Monachesi [10] writes, in this book "is found answers to some of the questions raised by the work of Burgess." In view of the unique place which it occupies in the history of prediction research a full analysis of its contents and achievements seems to be appropriate. Such an analysis is also needed on account of certain important differences between the case material from the Concord Reformatory, Massachusetts, used for the Glueck research and the case material of the present survey. It should be understood that the present survey is concerned with the prediction techniques rather than with the follow-up methods used by the Gluecks.

1.13 The Glueck study is based "upon a careful investigation into the life histories of all prisoners released from the Massachusetts Reformatory whose sentences expired in 1921 and 1922. There were 510 such men." [11]* The period between discharge from the Reformatory and the beginning of the investigation was in most cases longer, however, as many men had left this institution already before the expiration of their sentences, namely 51·8% of them in 1917 and 1918 and another 17% in 1919 and 1920. [12] In 85·3% of the cases the sentences imposed on the men were of indeterminate length, mostly with a maximum of 5 years, and in the remaining cases usually of 2 years. The fixed sentences ranged from 3 months to 6 years. The average period actually spent in the Reformatory was 21 months, the most typical period being 12 to 15 months. [13] 310 of the men had been committed to the Reformatory during the years 1916 and 1917, 86 between 1910 and 1915, and the rest between 1918 and 1921. The theoretical length of supervision after discharge, i.e. the difference between the time actually served and the maximum limit of the sentence, varied from nil to 20 or more months, with an average of 39·8 months; the actual periods were much shorter, however, with an average length of 18 months. [14] While the average age of the men at committal was 20·19 years, with a few of only 15 or less and 15·4% of 17 or less, there were, on the other hand, 33·1% between 21 and 27 and 6·6% even between 28 and 36.

1.14 Without going into details concerning institutional treatment and similar matters, some of the principal differences between the system at Concord and the Borstal system may be summed up as follows: the age range of

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* It should be noted already at this stage that in most of the tables in "500 Criminal Careers" the number of cases is smaller than 510.

the Concord cases was wider than that for Borstal cases, and the average age was higher than that of the cases used in the present study (20·19 years against 18·0 years). Some of the sentences received were longer than a Borstal sentence, up to 6 years. The average period of stay in the institution was 21 months as against 17·7 months for the present cases. The theoretical period of supervision after discharge was longer than in Borstal, whereas the actual period may have been not much different. The follow-up period after discharge from the institution, in many cases not much less than 10 years, was considerably longer than that for the Borstal cases. Another difference is that, whereas the cases used for the present study are a sample of the male population of English Borstal Institutions as a whole, the Glueck material covers only a single Reformatory. In their discussion of the "typicality" of their findings, the Gluecks express the view that their cases are representative not only of the general "run of the mill" of the Massachusetts Reformatory, but also of the population of Reformatories in other American states, although in the latter respect they regard this as a strong impression rather than as an established fact. The same applies in their view to the regime at Concord. A very detailed description is given of the latter, whereas, as pointed out in Chapter II below in the present study, the general features of the English Borstal system have been taken as generally known and attention has been paid almost exclusively to certain special features prevailing at the time from which the cases are taken. With regard to the question of typicality, it should be added that, as in a high proportion of Concord cases the men had committed their offences and/or had been sent to the Reformatory during the first World War, wartime conditions may have affected the typical character of the sample.

I.15   While a comparison of the principal findings of the Gluecks with those of the present study will be given below in Chapter VI their technique of investigation may here be contrasted with that of Burgess. The following differences should be noted:

In view of the unreliability and incompleteness of much of the information contained in the official files, the material was carefully checked and supplemented from many other sources. The finger-print files of the Department of Correction were consulted to verify the identity of the men. Moreover—and this has been regarded as one of the greatest advances made in this field of research—in a considerable proportion, 73% of the cases, the ex-prisoners or their near relatives were interviewed by an experienced field investigator to check and supplement the material and to obtain a truthful picture of the adjustment made.[16]   As a result, there were finally only 27 cases out of 510 on which no subsequent information whatsoever was available. The whole investigation, which had lasted for three academic years, and the methods used were described in the greatest detail. Every aspect of the various stages in the lives of the 510 men was scrutinised: their families, their personal and social background, criminal experience before committed to the Reformatory, their condition, conduct, occupation, etc., within the institution, and its effect on them; finally their parole and post-parole histories. In two other chapters the data thus collected were related to the criteria of success, partial failure and total failure as defined on the strength of the criminal records.[17]   (Of the 422 men whose post-parole conduct could be ascertained, 21·1% were successes, 16·8% partial and 61·1% total failures.)   First, the relation of the pre-Reformatory factors and, after

that, the relation of Reformatory, parole, and post-parole factors, altogether of over 50 factors, to post-parole criminality were analysed, using the statistical technique of the mean square contingency coefficient—a feature absent in Burgess's study. There were, however, deficiencies in their weighting system which will be discussed later. It was rightly stressed by the Gluecks that the correlations established in this way were not to be taken as indicating causes of criminal behaviour or recidivism; that some of the factors having a low correlation with recidivism might, nevertheless, have been responsible for initial delinquency and that these factors should, therefore, be carefully studied and recorded in the files.[15] The factors examined were classified as (a) those having a coefficient of correlation of under ·20 and, therefore, only slightly or not at all related to the criterion of success or failure; (b) those having a coefficient of from ·20 to ·40 and, therefore, appreciably related to the criterion; (c) those having a coefficient of ·40 to ·60 and, therefore, considerably related to the criterion.[16] Among pre-Reformatory factors of the first category were, for example, the type of crime for which the men had been sentenced to the Reformatory and their intelligence; in the second category there were, among others, their age at first delinquency, their physical condition on entering the Reformatory, and their psychiatric condition; in the third category was, in particular, the factor pre-Reformatory work habits. Among the post-commitment factors, in the lowest category were, for example, their working record in the Reformatory, and their length of stay in it; in the second category were the frequency and seriousness of their offences in the institution; in the highest category were their post-parole working habits and family relations.

1.16 The next step was to construct prognostic tables, using the 6 most important pre-Reformatory factors, i.e. pre-Reformatory work habits (C=·42), seriousness and frequency of pre-Reformatory crime (C=·36), arrest for crimes preceding the offence for which sentenced to Reformatory (C=·29), penal experience preceding Reformatory incarceration (C=·27), economic responsibility preceding sentence to Reformatory (C=·27), and mental abnormality on entrance to Reformatory (C=·26). It should be noted, however, that the total score yielded a correlation of ·45, which is only very slightly above that of ·42 for the single factor pre-Reformatory work habits. Whereas these 6 factors formed the basis for the construction of prognostic tables for the use of judges, the corresponding tables for Boards of Parole in deciding on release on parole or further supervision and similar matters included, in addition, the following factors: frequency of the offences in the Reformatory (C=·38) and criminal conduct during parole (C=·47). For the use of judges dealing with recidivists who had already been through the Reformatory and parole stages 5 post parole factors were added. Factors with a coefficient of less than ·20 were excluded from consideration. The scoring was done by adding up the highest and the lowest percentages of total failures which an offender could have and by adding two more score-classes between these two extremes. Finally, each individual offender was classified within these score-classes, and nine illustrative cases not used for the construction of the tables were presented to show the failure rates of men in the various score classes.

1.17 "Later Criminal Careers" [21] is a follow-up study to "500 Criminal Careers," undertaken some years after the publication of the first investigation. Of the original group of 510 men, 56 had mean vhile died. The remain-

ing 454 were followed up over a second 5-year period after the expiration of their sentences, with the primary object of examining the biological, psychological and social changes and the changes in criminal behaviour brought about by the passage of time. As we are not concerned here with these aspects there is no need to discuss the answers presented by the investigators. In the chapter dealing with prediction, the range of predictability is extended from the original 5-year span to a period of 10 years after expiration of sentence. In all, 68 factors were examined. Of the 26 factors showing a considerable relationship to criminal conduct over these 10 years the 5 which bore the highest relationship, correlations ranging from ·23 (age at first delinquency) to ·43 (mental condition), were used for the construction of the prognostic table. On the whole, it was found that the same factors as in the first study were again prominently related to success or failure, though the coefficient of correlation was now lower than before for the factor "work habits" and considerably higher for the factor "mental condition." In other chapters of the book, emphasis is placed upon mental abnormality as the strongest impediment to reformation,[(32)] whereas "the benign process of maturation" emerged as the principal factor producing success.[(33)]

1.18 No attempt was made in this study to check the validity of the tables produced in "500 Criminal Careers."

1.19 In the third work of this series, "Criminal Careers in Retrospect",[(34)] the same group of ex-prisoners was followed up for another 5-year period, i.e. for altogether 15 years after expiration of their sentences, and prediction tables were constructed to enable a judge to select the particular form of peno-correctional treatment best suited to the individual offender with special reference to his age at any particular stage of the whole period. Again no general validation of the tables was attempted, but the question of validation was discussed in general terms, and the 9 cases whose histories were presented in "500 Criminal Careers" were used to show their failure scores over the whole 15-year period and how they might have been dealt with by the authorities if the prediction tables had been available.[(35)]

1.20 In their second series the Gluecks are concerned with juvenile delinquents. The principal object of the first of the two studies in this series, "One Thousand Juvenile Delinquents",[(36)] was to examine the procedure followed by, and the co-operation between, the Boston Juvenile Court and the Child Guidance Clinic of the Judge Baker Foundation in Boston (now Judge Baker Guidance Center), as illustrated by a follow-up study of 1000 boys referred to the Clinic by the Court for clinical examination between 1917 and 1922. Did the carrying out of the recommendations of the Clinic have any influence on the after-conduct of these boys? Finding that the after-histories of those cases where the recommendations of the Clinic had been carried out by the Court were only slightly more favourable than the after-histories of the other boys (C=·12), the authors had to consider the possibility that in the first group factors other than the carrying out of those recommendations might have been responsible for the more favourable result. The relations of sixty-odd factors to success or failure were studied by means of two different statistical methods, the "factor method" and the "failure-score method". Including even factors where the correlation of the most favourable sub-class to reformation was very slight (factor method), the authors found that regardless of the carrying out of the Clinic recommendations that correlation was ·28. For the cases where the recommendations had been carried out the

correlation was ·89, which proved that this factor had some favourable effect independent of other favourable factors. For the construction of the prediction tables, however, which are presented in Chapter XI of the book, only the 6 factors bearing the highest correlations with success are used: discipline of juvenile by father (·288), discipline of juvenile by mother (·161), school retardation (·131), school misconduct (·206), age at first-known behaviour disorder (·187), length of time between onset of delinquency and examination of child by the Clinic (·161). It will be noted that the correlations are only moderately high and that the last-mentioned factor appears exclusively to a group of cases all of whom were examined by a Child Guidance Clinic. The correlation of all 6 factors to the criterion was ·28, whereas if the computation was confined to those cases where the Clinic recommendation had been carried out it was ·45.

I.21 The second study in this series, "Juvenile Delinquents Grown Up",[27] is a follow-up study, over a further period of 10 years, of the original boys. These boys, at the end of the first follow-up period on an average age of 18½ years, were now of an average age of about 29 years. 60 of them had in the meantime died, but all but 47 of the remaining 940 could be traced and in 591 cases the men or members of their families were personally interviewed.[28] While we are not concerned with the results of this study so far as it shows the changes in the circumstances and conduct of this group, it may be mentioned that one of the major findings was the improvement in conduct with advancing age. Published 3 years before "Criminal Careers in Retrospect", it was the first study covering a period of 15 years and relating conduct to age and treatment. Conduct was studied not only, as in the previous investigations, for the period after the completion of the various forms of peno-correctional treatment, but also for the treatment period itself, and an attempt was made to distinguish different "conduct types" and "treatment types".[90] Prediction tables were then constructed in the usual way by selecting, out of a total of some 60 factors examined, the 5 factors showing the highest correlations with success or failure, i.e. birthplace of father (·26), birthplace of mother (·22) time parents were in United States (·20), religion of parents (·20), age of offender at first misbehaviour (·22). With regard to the first 3 of these factors it might be of interest to note that the incidence of serious criminality was considerably higher in the case of those whose parents were born in U.S.A. and resident there for life. Moreover, it should be noted that these 5 factors are specifically related to American conditions, and also that the highest correlation reached by any single factor was ·26. The general prediction table was then supplemented by 8 others showing the likelihood of success, failure, early failure and later success, or erratic behaviour during various forms of treatment such as probation, probation under suspended sentence, Reformatory, prison and also in the Army and Navy. The practical application of these tables to a small number of cases was demonstrated, but no general validation was attempted.

I.22 "Five Hundred Delinquent Women",[30] published in the same year as "One Thousand Juvenile Delinquents", is unique in so far as it is the only one of the Glueck studies dealing with females and that it is not part of a series. 500 cases of women were selected in consecutive order whose parole from the Women's Reformatory at Framingham, Massachusetts, expired between 1921 and 1925. Their average age at the end of their 5-year post-parole was 32·6 years. After a full description of the Framingham Reforma-

tory and a detailed account of 11 life histories, the usual painstaking study was made of these 500 women, their characteristics and development after discharge. If anything, the investigation was even more detailed and more difficult than in "500 Criminal Careers".[31] 285 factors were examined, of which 60 or 70 had to be discarded because of lack of adequate information. For the tracing and interviewing of the women one male and one female field worker were employed, and special attention was paid to the differences between follow-up studies of male and of female offenders.[32] With regard to the "typicality" of their findings, the authors took the same view as in "500 Criminal Careers" that, although no absolutely conclusive answer was possible, "the frequent incidence among female offenders in our Reformatories of many of the characteristics of our women" could be reasonably assumed.[33]

I.23 In constructing their prediction tables the authors tried to simplify the technique adopted in "500 Criminal Careers". Instead of using the "somewhat involved computation of mean square contingency", the degree of association between any particular factor and non-recidivism was established by the "determination of the maximum percentage difference between any sub-class of a particular factor and the expectancy of recidivism for the entire group of cases involved".[34] As, for example, the total rate of non-recidivism for the group was 23·5 and that for those with regular church attendance 28·4, for those with irregular church attendance 14·9 and for those with no attendance 40·0, the degree of association was taken to be $40.0 - 28.5 = 16.5$. Of the 15 factors bearing the highest association to non-recidivism the 5 which seemed to be most suitable were used for the construction of the tables, i.e. retardation in school, neighbourhood influences within a year of commitment, steadiness of employment, economic responsibility, mental abnormality. No validation of the tables was attempted, but the common-sense prognoses made in 78 of these cases by the staff of the Reformatory, described as "particularly intelligent and forward-looking", were compared with the actual outcome, with the result that at least two-fifths of these prognoses had to be regarded as grossly erroneous.[35]

I.24 The 6 Glueck studies so far described may be presented in a diagram as follows:

5 years	5 years	5 years	= 15 years follow-up
500 Criminal Careers	Later Criminal Careers	Criminal Careers in Retrospect	
1000 Juvenile Delinquents	Juvenile Delinquents grown up		
500 Delinquent Women			

I.25 While "After-conduct of Discharged Offenders"[36] contains mainly a brief recapitulation of the main aspects of the earlier Glueck studies, "Unraveling Juvenile Delinquency"[37] bears a different character. It is primarily a control-group study of 500 delinquent boys committed to State Correctional Schools in Massachusetts and 500 non-delinquent boys from

ordinary State schools in Boston. Their average age when selected for study was over 14 years. There was no follow-up work connected with this study, which covered altogether 402 factors, but some of the differences between the two groups discovered in its course were used to construct tables designed to predict the future conduct of children at school entrance, i.e. aged six or seven. While the differences in physique and health and those emerging from certain psychological tests (Wechsler-Bellevue and Stanford Achievement Tests) were not regarded as suitable for the purpose, 8 tables were constructed based respectively on (a) traits of character structure derived from Rorschach Test, (b) personality traits derived from psychiatric interview, and (c) social background. In accordance with the technique used in previous studies, each table was made up of 5 factors, i.e. for the first table: assertiveness, defiance, suspiciousness, destructiveness and emotional lability; for the second table: adventurousness, extroversion in action, suggestibility, stubbornness and emotional instability; for the third table: discipline of the child by the father, supervision of the child by the mother, affection of the father for the child, affection of the mother for the child and cohesiveness of the family group. The authors explain that, as it was the object of these tables to identify potential delinquents already at school entrance age, the predictive factors had to be selected from those operative in boys of that age. The tables were then constructed by comparing the incidence of these subclasses of each factor for the delinquent and the non-delinquent groups and by establishing score classes. It was pointed out that the total score retained its quality as a predictor regardless of variations of its component parts. Comparisons of the results of the three tables showed that there was agreement between the social and the psychiatric tables in 87·9%, and between the psychiatric and Rorschach tables in 69·8%. In 49% all three tables placed a boy in the predictive category to which he properly belonged in view of his conduct, and in another 37·8% at least two of the three tables succeeded in doing so. Only 3·4% of the boys were incorrectly identified as delinquents or non-delinquents. In explanation of disagreements between the tables the authors pointed out that a high failure score had a different meaning in different tables, the Rorschach table referring to basic character structure, the psychiatric table to the dynamics of the personality, and the social table to family inter-relations.

1.26 "Unraveling Juvenile Delinquency" differs from most other prediction studies in trying to predict future delinquency in boys not yet delinquent and in trying to utilise their characteristics at the age of fourteen to predict future delinquency of children aged six or seven.

1.27 While an assessment of the various aspects of the Glueck technique will be made in the appropriate sections of subsequent chapters, a few observations of a general nature may be not out of place already at this stage:

1.28   A certain amount of overlapping will have been noticed between some of the factors used for the construction of the Glueck tables. Although, for example, the factors "industrial habits preceding sentence to Reformatory" and "economic responsibility preceding sentence to Reformatory" over to some extent the same ground, [37a] both factors are included in the prediction tables in "500 Criminal Careers" and "Later Criminal Careers". The authors have been aware of the problem and discuss it in some of their later books. While in "After-conduct of discharged Offenders" [38] overlapping factors are regarded as "largely dead-wood in the prognostic process", in "Criminal

Careers in Retrospect",[39] where the matter is more fully treated, the authors take the view that the use of 5 partially interrelated factors might be preferable to that of 8 independent factors as in the former case errors in classification on the part of those charged with the collection of the data would have less serious results. In a special statistical examination of the factors used, which the Gluecks arranged for one of their tables, only a very small degree of overlap was actually discovered. Nevertheless, the authors express themselves in favour of avoiding unnecessary interrelations.

I.29   Another important point made by the Gluecks concerning the selection of predictive factors is that, for practical reasons, objective factors on which information is easily obtainable and easily verifiable by the Courts should be preferred to factors involving difficult subjective evaluations such as, for example, "mental condition".[40]

I.30   The question of what number of factors is most profitably employed for the construction of the tables leads to a discussion of several other American studies made after the publication of Burgess's investigation and of "500 Criminal Careers".

OTHER AMERICAN STUDIES

I.31   Professor George B. Vold of the University of Minnesota has made several important contributions to the subject. In his book "Prediction Methods and Parole"[41] he made the records of 542 men discharged from the Minnesota State Prison and of 650 men discharged from the Minnesota State Reformatory during the period 1922 to 1927. The number of factors on which information was collected from the records was 49 (84 of them pre-parole factors). Using the coefficient of mean square contingency, the correlations were worked out, for the combined prison and reformatory groups, between 44 factors and outcome on parole. The highest correlation, that for previous work record, was 0·288; the two lowest were age at conviction (·060) and aid given to dependants while the inmate was in prison (·050). The author concluded that, while no single factor appeared to be of outstanding importance, few, if any, appeared to be without any significance. In one respect his figures were at variance with the findings of most other investigators before and after him: parole violations showed no tendency to be most frequent in the earlier part of the parole period, but occurred fairly uniformly throughout the whole year. This seemed to be a strong argument against the practice then prevailing in Minnesota to limit the period of parole to one year.[42] As in previous studies, in a considerable number of the cases information was not available on some of the factors.[43] Whereas no use had been made of this category in the Burgess and Glueck studies, Vold paid special attention to the various possibilities of dealing with it (see below).

I.32   An interesting feature of Vold's study is his comparison of the efficiency of the Burgess technique of using all available factors without weighting them with the Glueck technique of using only the most significant factors. Both techniques were tried out in combination; for example, only the highest 17 factors, all of them with C values above ·100, were used together with the Burgess method of crediting each man with one point for each favourable category. In addition, prediction tables were also constructed from the lowest 17 pre-parole factors and from selected 25 pre-parole factors on which information was nearly complete. Very little difference was found between the results obtained by the two first-mentioned techniques, and in view of

the greater laboriousness of the Glueck method of scoring no further use was made of it.[44] The most satisfactory results, i.e. those producing the sharpest differentiation between parole violators and non-violators, were obtained from tables based on the selected 32 factors, whereas the least satisfactory, but, nevertheless, by no means negligible, differentiations were obtained from the 17 factors showing the lowest contingency values. Actually, the difference in predictive value between tables using only high contingency and those using only low contingency values was comparatively small.[45] Other noteworthy features of this study were Vold's attempt to validate his tables by dividing his material into two randomly selected halves in order to use the one group as the "operating" and the other as the "control" group, and his use of another investigator to make an independent assessment of some of the cases. In a later study[46] Vold compared, for a group of 282 Minnesota prisoners, (a) the correlation between predicted and actual outcome, which was about ·4, (b) the correlation between the estimate of a parole officer and the actual outcome, which was not quite ·3. In this connection Vold rightly emphasised that such comparisons between predicted and actual outcome refer only to the number of cases in the various categories without giving any information regarding the correctness of the prediction for individuals.

1.33 A year after Vold, Professor Elio D. Monachesi, also of the University of Minnesota, published his book "Prediction Factors in Probation", the first prediction study using probation material.[47] A total of 1515 probation cases, adults and juveniles, handled by a Probation Office in the State of Minnesota during the years 1923 to 1925, were examined. The information found in the records was reduced to 50 factors for the juvenile and 34 for the adult group. Following Vold's technique, the classification of certain "highly conceptual" items, such as "social type" (Burgess), was rechecked for a small sample of the cases and the agreement between the first and second entries checked by means of three statistical measures of reliability. Also in conformity with Vold, the group of "no-information" cases was treated in the same way as the rest and comparisons were made between prediction according to the Burgess and the Glueck techniques. It was again found that the two techniques furnished approximately the same results.

1.34 Simultaneously with Vold and Monachesi, Clark Tibbitts published two articles incorporating the results of a study of 3000 youths paroled within the 7-year period 1921–7 from the Illinois State Reformatory at Pontiac.[48] The object of his study was to validate Burgess's findings by applying his technique to a larger sample taken from one institution. With regard to his definition of "success", it is worth noting that, as in the experience of the author most violations of parole other than purely technical ones occurred within the first 12 months, subsequent violations were not counted. The technique employed was essentially the same as that of Burgess, i.e. a comparison of violation rates for each of the sub-classes of a number of factors. Most of the factors employed by Burgess, including "Social Type", were retained, but the total number was increased to 28. No Pearsonian coefficient of correlation was used, but to some extent a tetrachoric "r" was calculated. The highest correlation thus reached was ·179 for type of offender (first offender or recidivist). With regard to the predictive value of the type of offence for which the parolee had been committed, Tibbitts's figures confirm Burgess's finding that "those guilty of the crimes that shock society are the least likely to violate parole. The type of neighbourhood where the

offender lived at the time of the offence and his work record were found to be even more predictive than in Burgess's study. Whereas offenders of low intelligence fared less favourably than in the previous investigation, "emotionally unstable" individuals showed in both cases the lowest violation rates.

I.35 A prediction scheme not based upon follow-up studies was published in 1935 by Walter Webster Argow.[40] He devised a "Criminal-Liability Index" (CLI) by analysing 37 factors in a group of 563 inmates of Connecticut jails, contrasting the percentage of first offenders and of recidivists from each factor. If, for example, the percentage of first offenders among men between 36 and 40 years of age was 8 and that of recidivists 14, the ratio between the two groups, using the recidivist figure as base, was ·57 or, translated to the scale of 10, it was 6. In this way, each individual's score was established by adding the values for 31 factors, dividing the total by the number of factors and by the mean for the group. The result was called the CLI.

I.36 In the same year, Dr. Norman Fenton published his book "The Delinquent Boy and the Correctional School",[60] an account of the work of the Whittier School in California. It contains a comparison with regard to 200 factors of the after-histories of 400 Whittier boys over a period of 3 to 5 years after admission, i.e. mainly for the first 2 years of their post-institutional history. The statistical method used was to work out the differences between those who were regarded as adjusted and those who had failed to adjust according to a "critical ratio" of significance. A critical ratio of 3·0 was regarded as significant, one of 2·0 to 3·0 as probably significant. For a number of factors the critical ratio was over 3·0 or even over 4·0 (Tables 44 and 45), particularly for factors relating to conduct at Whittier, and the author concludes that "some general rating of social adjustment at the institution and of school spirit may offer valuable data as to the probabilities of the boys' future adjustment". He also stresses the importance of the first 2 years after discharge.[51]

I.37 The much discussed technique used by Ferris F. Laune[62] differed from that of previous investigators in that he placed the emphasis on a study of the prisoner's attitudes which he tried to explore, in the first instance, by using the subjective "hunches" of particularly well qualified fellow-prisoners regarding the parolability of the inmate. Discussions between the prisoner-investigators produced a number of commonly agreed factors which had, apparently, formed the basis of the original hunches.

I.38 H. Ashley Weeks's[63] comparison of 420 delinquent and 421 non-delinquent boys, picked at random from secondary schools of the city of Spokane, is another example of a prediction study not based upon follow-up research.

I.38a In 1939 the United States Department of Justice published as part of the Attorney-General's comprehensive "Survey of Release Procedures"[63a] an analysis, based on the case histories of approximately 100,000 felons, of "some factors associated with parole selection and outcome". This analysis showed that, while with the criteria so far employed those prisoners who had a better chance of being paroled were in general those who turned out to be "better risks", the results did not seem to imply that the methods of parole selection were in fact adequate. A second analysis was, therefore, made of the case histories of 22,598 persons released from Federal institutions between 1930–5, of whom 17,049 had been paroled while 5554 had been given conditional release. The object was to ascertain whether the construction and use

of prediction tables would materially improve the "common-sense" estimation made by the Federal Parole Board. Even this second study is not a prediction study in the strict sense of the term as no prediction tables were actually constructed. The association of 82 factors to outcome was shown, not by way of coefficients of contingency, but in percentages of agreement, and there was no weighting of the individual factors. To test the reliability of the official records used, consistency tests were made by having the information on 113 factors which had been abstracted by one group of survey recorders from 500 cases histories recorded by a second group of workers. The results indicated that the extent of consistency in the recording of the data was as high as, if not higher than that found in previous studies by Vold, Monachesi and Tibbitts. In view of the considerable variations of violation rates in the various Federal institutions it was not regarded as appropriate to present figures based upon combined violation rates, and data were shown separately for the three largest institutions: Leavenworth, Atlanta and Chillicothe. The factors studied were divided into 5 groups: parental, social, criminal, institutional and post-institutional history, with special emphasis on the last-mentioned category. Some of the factors used were highly subjective, as for example, "Congeniality of parents", which included "frequent bickerings", "abandonment of home for short or long periods" and other "indications of strained relations"; "congeniality of marriage"; "congeniality with parents"; "habits", which included, among others, the sub-categories "nomadic" and "sexual promiscuity". As the results are shown without any weighting and for each institution separately, no summary can conveniently be given. The final conclusion of the authors of the study is that, while it would have been possible to construct prediction tables using 89 of the 82 factors, there was no evidence that the use of such tables would produce any material improvement in the Federal parole practice. It was admitted, however, that, parole prediction still being relatively new, with more information and reliable official records more refined statistical techniques (the possibility of more accurate predictions could not be excluded.

I.39 Dr. Ohlin's book "Selection for Parole"[146] deserves special attention not only because of its scientific value but also in view of the author's official position as the research sociologist of the Division of Correction of the State of Illinois, where a routine prediction system for parolees was established as early as in 1933.[163] Dr. Ohlin's technique is largely derived from Burgess's pioneer study, also carried out on Illinois parolees. The following are the principal stages in the construction of Ohlin's prediction or, as he prefers to call them, experience tables:

I.40 First, a sample of at least 1000 cases had to be selected having behind each offender after discharge long enough for the outcome of their parole to become final, which in Illinois means a period of 5 years. The selection of predictive items was made from factors likely to be significant in view of the results of previous researches. For the construction of the table currently used in Illinois and based on material from 4941 parolees, the following 12 factors, out of 27 on which information had been collected, were retained: type of offence, sentence, type of offender, home status, family interest, social type, work record, community, parole job, number of associates, personality, psychiatric prognosis.[66] Each factor was broken down in subclasses, numbering from 2 to 7, and the violation rate was obtained for each of these subclasses by dividing the number of violators by the total of persons in the

subclass. For the factor "family interest", for example, the violation rates ranged from 5% in the subclass "very active" to 40% in the subclass "none", compared with an overall rate of 28% for the total of 4941 cases. Accordingly each subclass was marked as a favourable, neutral or unfavourable predictive item; for example, under "type of offence" homicide and sex offences were rated as favourable, burglary as unfavourable, items. Each parolee was given one favourable point for every favourable subclass in which he fell, one unfavourable point for every unfavourable and one zero for every neutral subclass. His final score was obtained by subtracting the number of unfavourable from that of favourable points, whereas the neutral subclasses were ignored as having no predictive value. As a result of a series of tests designed to measure the statistical significance, association with outcome, reliability and stability of the value of the subclasses some of the latter were omitted. The experience table was then constructed showing a range in violation rates from 3% for persons with 5 to 10 favourable points to 72% for those with 5 to 6 unfavourable points. Dr. Ohlin does not believe in highly complicated scoring and weighting procedures which, in his view, add very little to the value of the table. Nor does he regard the individual interview technique of the Gluecks as practicable in view of its high cost. On the other hand, he stresses the need for field investigations to supplement the classification and prediction reports; the need for constant checks of the reliability of the classifications; and for routine adjustments of an experience table to keep it abreast of the changes incessantly occurring in the parole situation. Further technical suggestions for the organisation of a routine prediction system are made in the Appendixes, and it is stated that experience in Illinois has shown up to 36% increase in accuracy of prediction through close adherence to the prediction table.

I.41 Ohlin follows Burgess not only as far as the absence of a weighting system is concerned, but also in his adoption of such factors as "social type" with the same or similar subclasses (see above under I.10), which he regards as one of the most useful predictive items. Even for highly subjective subclasses reclassification, according to Ohlin, showed a remarkable degree of agreement. Some of the other factors used by Ohlin are also highly subjective, in particular "personality" and "psychiatric prognosis". In their Introduction to Ohlin's book, Burgess and Sellin suggest that data obtained by personality tests and interviews, and also the ratings of the inmate by members of the staff, should be used in conjunction with statistical prediction.

I.42 The principal difference between Ohlin and Burgess is that the former, in so far following the Gluecks, is in favour of using only a small number of highly predictive factors for his table, and that in other respects, too, his statistical technique bears evidence of the improvements in methods of research brought about in the past 20 years.

I.43 Nearly 20 years after Monachesi, Professor Morris G. Caldwell of the University of Alabama published the preliminary results of another large-scale follow-up study of probationers.[10] His material consisted of 1862 Federal probationers whose probation terminated between 1st July, 1937, and 31st December, 1942. The 5 factors most significantly related to outcome were: Age at beginning of Probation (C=·152), occupational status (·162), number of criminal offences (·290), number of commitments to correctional institutions (·240) and length of probationary supervision (·639). With regard to the latter factor, the author concluded that the turning point

towards greater success seemed to occur between 2½ and 3 years on probation. On the the other hand, probation violation occurred most frequently during the first 2 years. No prediction tables were published by Caldwell.

1.44 Albert L. Reiss, Jr.,[58] developed prognostic instruments to predict the recidivism of a sample of 786 juvenile delinquents placed on probation in the years 1943 and 1944 by the Juvenile Court of Cook County, Illinois. A follow-up sample of 374 cases was used to test the validity of the prediction instruments. Starting from the hypothesis that a small number of stable predictors is likely to yield the greatest accuracy and efficiency in prediction, he selected, out of a total of 20 unfavourable factors found to be significant, the following 5 as stable predictors: (a) economic status of family: dependent; (b) truancy: usually truant; (c) deportment record in school: poor or very poor; (d) adequacy of personality controls: relatively inadequate ego and super-ego controls; (e) recommendations for probation: place delinquent in adequate community environment or closed institution or psychotherapy.

1.45 These items were classified as stable predictors because they were not only significantly correlated with the criterion but had also shown the same direction of association in at least two previous prediction studies undertaken at different times. Prediction based upon these items was found to be more accurate than prediction based upon five unstable items. Generally speaking, it was found that stable predictors were those with relatively higher associations with the criterion than unstable predictors. Attention was also drawn to the fact that predictions are likely to be more efficient for socially homogeneous samples than for a heterogeneous population, such as one including Negroes and Whites. This is in accordance with an observation made by Vold with regard to a sample consisting of inmates of prisons and reformatories.

1.46 It has to be noted that the form of these items contains strong subjective elements and may be defined differently by different observers. No definition of "adequacy of personality control" is given by the author. In a second paper [59] the author explains, however, that data on this item were obtained "from the judgments of the social work staff at the juvenile court and the reports of the psychiatrists at the Institute for Juvenile Research (in Chicago)". This item was, in fact, found to be the most efficient single predictor and only slightly less efficient than prediction from a battery of four items.

1.47 In the "Cambridge-Somerville Youth Study",[60] the social development of 650 boys aged between 6 and 12 years and resident in these two cities of the State of Massachusetts, some of them regarded as "pre-delinquent", others as "normal" or doubtful, was studied over a considerable period of time under experimental conditions, i.e. 325 of them were given the benefit of the services of specially selected counsellors, whereas the other 325 were left to the ordinary social services existing in their localities. The practical side of the research, which was commenced in 1935, came to an end in 1945, though for reasons mainly connected with the war many boys had lost touch with the study already some years earlier. As stated at the end of the issue of 1937 to 1938 been given a careful prognosis as to his likely future delinquency by a Selection Committee consisting of a psychiatrist and two penal administrators of wide experience in dealing with young offenders, it was natural that some of the material collected by the Study should be used to check the

accuracy of their prognoses in the light of subsequent actual developments.[61] For the purpose, 100 T-boys, i.e. boys belonging to the group which had been provided with counsellors, and 100 C-boys, i.e. those who had received no such assistance, were selected. 69% of them had originally been labelled as probably future delinquents, 25% as likely non-delinquents, and 6% as doubtful. These predictions were based upon information regarding the mental and physical condition of the boys, progress in school, family conditions and the boys' adjustment to them and to their environment in general. Little information was available on the boys' heredity and the first few years of their lives, nor had the predictors been able to interview them in person. It was found that the factors regarded by the predictors as important could be arranged under 52 headings, of which 21 seemed to be of particular importance. When, approximately 10 years later, these 200 cases were reassessed by two judges, the result was as follows:—In 22 of the hundred T-boys and 16 of the hundred C-boys there was perfect agreement between predictors and judges. Of 70 T-boys and 68 C-boys regarded as pre-delinquents by the predictors only 23 and 27 respectively had actually become delinquents. Of 33 T-boys and 27 C-boys regarded as not pre-delinquent 20 and 24 respectively were later judged "seldom or least delinquent". Delinquency had been accurately predicted for most cases in which it subsequently occurred, but it had also been predicted in many cases in which it failed to occur. The correlation between prediction and outcome was ·44 for the T-boys and ·54 for the C-boys; for both groups together it was ·48. The difference between ·44 and ·54—a difference which had to be expected in view of the special treatment received by the T-boys—was not regarded as statistically significant.

I.48 Two other attempts were made by the Study to check the predictive value of prognostic techniques: Teachers were asked to make a prognosis, and a Behaviour Rating Scale (Haggerty-Olson-Wickman) was also used. In the case of the teachers, the correlation between their predictions and the outcome was ·85 for the T-group and ·59 for the C-group, and for both groups together ·48. Here the difference between the two groups was regarded as a slight indication of the effectiveness of the special treatment received by the T-boys. With regard to the predictive value of the Rating Schedule, the result seemed to show that the Schedule was able to differentiate the "most delinquent" from the "least delinquent" cases.

VALIDATION STUDIES

I.49 In the Social Science Research Council's Bulletin on "The Prediction of Personal Adjustment", published in 1941, the principal author, Paul Horst, made the well-founded criticism that "most 'prediction studies' end without ever attempting to predict".[62] It was not enough, he added, to show that a prediction formula worked well when applied to the original sample; its applicability to other cases had to be demonstrated. In the field of penology, he was able to quote only three such attempts to validate a previously established formula: those by Tibbitts (above paragraph 34), Vold (above paragraph 32) and an inconclusive study by Sanders. Since Horst's survey was published, there have been several further attempts to validate some of the Glueck tables:*

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* German validation studies will be mentioned below under Part II.

I.50 The first of these validation studies was made during the last war by Schneider and La Grone with the co-operation of Professor and Mrs. Glueck.[63] They applied some of the prediction tables in "Criminal Careers in Retrospect" to a sample of 200 soldiers who had been delinquents in civilian life and were at the time of the inquiry in confinement for military offences. The sample was chosen from a group of 500 by selecting those files which contained the most adequate data on the 5 factors of the prediction table. The investigator, Mrs. Glueck, was given information only with regard to these 5 factors (education of parents, intelligence of offender, age at first delinquency, age began work, industrial skill). The object of the study was to find out in how many of these 200 cases it would have been possible, without any additional information, merely by applying the prediction table to foresee and predict that they would cause trouble in the Army. The result was that 47·5% of the men had only a 3 in 10 chance of becoming successful soldiers and another 37% had a chance of 8½ in 10, whereas 10% had a 50:50 chance. In other words nearly 85% of them might reasonably have been rejected forthwith if the table had been applied. This is, however, an incomplete test since all cases were failures.

I.51 Another attempt to validate some of the Glueck tables was made by the staff of the Hawthorne-Cedar Knolls School at Hawthorne, New York.[61] This school, which is maintained by the Jewish Board of Guardians for children with behaviour disorders and personality problems, provides a combination of the usual environmental techniques with the services of a fully equipped psychiatric clinic. The tables used for the study were taken from "One Thousand Juvenile Delinquents" and from "Unraveling Juvenile Delinquency" (only the Social Prediction Table was used). After a pilot study of 50 boys committed to Hawthorne in 1932-3, the tables were applied to a group of 100 boys admitted as delinquents between 1940 and 1942. These boys differed in many respects from the boys in "One Thousand Juvenile Delinquents". As these differences, however, did not, or only slightly, refer to any of the 6 factors used for the construction of the prediction table, they were, in particular in the light of previous experience, regarded as immaterial. The application of the earlier Glueck table showed the following results: 64 of 100 boys had 92·6 out of 100 chances of recidivism, 19 had 89·1 chances, 9 had 67 and 8 had 30 chances. The application of the table from "Unraveling Juvenile Delinquency" had only slightly more favourable results. Actually, the follow-up of the 100 boys made in 1950 showed that many more, namely 70 of them, had been successes, and the explanation of the considerable difference between prognosis and outcome was found in the intensive psychotherapy provided at Hawthorne.

I.52 Richard E. Thompson tried to validate the Glueck Social Prediction Table, published in "Unraveling Juvenile Delinquency", by applying it to some of the case material of the Cambridge-Somerville Youth Study.[65] A sample of 100 boys, pre-delinquents and others, was selected for whom sufficient information was available in the files on all 5 factors used for the construction of the Glueck Social Prediction Table, i.e. discipline of boy by father, supervision of boy by mother, affection of father for boy, affection of mother for boy, cohesiveness of family. These 100 cases were then scored by Dr. Eleanor T. Glueck, who was given no other information than that relating to the 5 predictive factors. When her prognoses were compared with those of the three members of the Selection Committee (see above) it

was found that, whereas the latter had made accurate predictions in 61·5 to 65·8%, Mrs Glueck had been correct in 91%. There was a difference in accuracy between the predictions for those boys who became delinquents and for those who did not. Of the 20 boys who actually became delinquents 18 were accurately predicted by the Selection Committee and by Mrs. Glueck. Of the 80 who remained non-delinquent 91·3% were accurately predicted by Mrs. Glueck, but only 53·5% to 58·7% by members of the Committee.

I.53 The author stresses that the Glueck Social Prediction Table can be applied not only to boys of 11 to 17, but also to younger ones, and that it works regardless of racial origin, intelligence and social status.

PART II

EUROPEAN PREDICTION STUDIES

I.54 Prediction research in Germany was initiated by the late Professor Franz Exner of the University of Munich as a fruit of his visit to the United States some years after the publication of the first Glueck studies.[66] One of his students, Robert Schiedt,[67] examined in 1935 the records of an un-selected sample of 500 offenders discharged from Bavarian prisons in 1931. The prognoses made for these men by the prison doctors on discharge had been favourable in 38%, unfavourable in 29% and doubtful in 33%. Four years later it was found by Schiedt that the favourable prognoses were wrong in 26% and the unfavourable prognoses in 28%. Not considering the cases, numbering one-third of the total, in which the doctors had been unable to express any definite views, their prognoses had been mistaken in 26·5%, a proportion which was regarded as unduly high in view of the detailed examinations of prisoners by the crimino-biological service established in German prisons. When Schiedt made a statistical analysis of a number of characteristics of these 500 ex-prisoners he found that individuals showing one of the following 15 factors had a rate of recidivism considerably above the average of 49%: 1. bad heredity; 2. serious criminality of ascendants; 3. un-favourable educational conditions; 4. bad scholastic attainment and school conduct; 5. premature breaking off of an apprenticeship; 6. irregular working habits; 7. beginning of criminal activities before the age of eighteen; 8. more than four previous convictions; 9. particularly short intervals between discharge from a penal institution and subsequent conviction; 10. criminality extending over the areas of several district courts; 11. psychopathy; 12. drunken habits; 13. bad general conduct in prison; 14. discharge from prison before the age of 36; 15. bad social and family conditions after discharge.

I.55 In accordance with the Burgess technique, Schiedt allotted to each case one "bad point" for each of these 15 factors. Offenders with nil to 3 bad points he regarded as "corrigible", those with 10 or more as "incorrigible", and those with 4 to 9 as "doubtful". Of 131 corrigibles, only 16=12·2% were failures, whereas of 288 doubtful ones 53·9%, and of 81 incorrigibles 78=96·3% failed. For some of the factors, i.e. 9, 10 and 15, the percentage of recidivism exceeded 80 or even 90%, against the general rate of recidivism of 49% for the whole sample.

I.56 Schiedt's point system was criticised by Trunk and Gerecke. Trunk[68] applied it in 1937 to a sample of 100 convicts with sentences of not more than

8 years, discharged from the prison at Straubing, Bavaria, not later than at the end of the year 1932, and for whom he had made prognoses before discharge in his capacity as the prison medical officer. He had regarded 88 of the prisoners as corrigible, 45 as incorrigible and 17 as doubtful, and when checking his prognoses he found that 71% of them had been correct, whereas under Schiedt's point system only 51% of them would have been correctly predicted. His criticisms of Schiedt's system are in part concerned with technical details such as definitions and overlapping of factors, in particular 11 and 12; with the absence of any weighting of factors; and with the high rate, 27%, of "doubtful" cases. In part, however, his objections are directed against the point system as such, which he regards as inferior to the intuitive prognosis of the total personality of each individual.

1.57 Gerecke,[60] who also criticised the absence of any weighting of factors, tried to improve the point system by substituting different factors for some of those used by Schiedt; by attaching different point values to the factors (e.g. age of first conviction: point value 3; bad environment: point value 2); and by multiplying each point value by 1 to 4 according to the intensity of the factor in an individual case.

1.58 On the other hand, Schiedt's table was successfully applied to different groups by Mayverk and Schwaab:

1.59 Mayverk,[70] as head of the Crimino-biological Service at Hamburg, applied in 1938 to a sample of 29 prisoners examined by that Service between 1929 and 1938. He found that the favourable prognoses made by the Service had been wrong in 61·6%, and the unfavourable prognoses in 46·7% of the cases. According to the point system, however, only 11·4% of the favourable and 6·1% of the unfavourable prognoses were wrong. In the case of both techniques, the point system and the "intuitive" technique applied by the Service, the percentage of "doubtful" prognoses was unduly high, namely 48·4%, and 69%, respectively. He showed, however, that Schiedt's category of doubtful cases, which included all those with from 4 to 9 bad points, was unnecessarily wide and could be reduced to a category including only those with from 5 to 7 bad points. He was also critical of some of Schiedt's 15 factors.

1.60 Schwaab[71] applied Schiedt's table to a sample of 400 recidivist offenders guilty of offences against property. Omitting Schiedt's factor 2 (serious criminality of ascendants), for which no adequate information was available, he found that none of the offenders possessing no bad points had become failures, whereas all those with 14 bad points had failed.

1.61 Kohnle,[72] examined in 1938 the 80 boys discharged from German Reformatories (Fürsorge-Erziehung) between 1926 and 1932, of whom 67% had subsequently been convicted. His object was also to apply and, if possible, vindicate Schiedt's table. In view of the lower age of his cases and of gaps in the files, however, he had to modify or to omit some of Schiedt's factors, but a number of the remaining factors proved to be of predictive value.

1.62 In the third part of his recent book "Der Frühkriminelle Rückfallsverbrecher" [73] or "Criminalité Précoce et Récidivisme", the Swiss criminologist and former Juvenile Court judge, Dr. Erwin Frey, has produced what probably amounts to the most determined criticism of the American prediction studies. At the same time, he has presented an elaborate prognostic scheme of his own. All American studies so far published suffer in his view

from the following weaknesses: their data are inadequate for the vital period of early childhood and in particular with regard to biological and hereditary factors. As psychiatric reports are likewise missing for the majority of cases, there is inevitably, he thinks, an undue emphasis on social factors, and all this together has produced a distorted picture. Overcomplicated statistical techniques take the place of comprehensive and reliable information about the all-round development and structure of the human personality as a whole. Dr. Frey rejects the idea that a correct prognosis can be made by using, instead of a logically and criminologically coherent and integrated picture of the development of the total personality, a small number of isolated and in no way interrelated factors. In view of the attempts made by the Gluecks in "Unraveling Juvenile Delinquency" to establish prediction tables for very young children, he stresses that no reliable prognosis is possible before the age of 16. The German studies referred to above are regarded by Dr. Frey as superior to their American models in view of the more thorough examination of individual offenders carried out by the German Criminological Service; they, too, are inadequate, however, with regard to early childhood. He favours the suggestion made by Gerecke (above) to differentiate the various factors by attaching to them different point values and to multiply the point values according to the intensity of the factor concerned in an individual case.

1.63 Dr. Frey's own scheme is essentially a combination of an assessment of the personality as a whole (*Gesamtbeurteilung*), on the lines of intuitive prognosis, and of the usual point system modified by differentiations and multiplications similar to Gerecke's suggestions. Two different forms of prediction are worked out: the one, of a preliminary nature (*Vorprognose*), to be prepared during the preliminary proceedings for offenders between 16 and 18; and the second, more definitive prognosis (*Nachprognose*), adding to it information concerning the institutional and post-institutional periods of the offender's life and prepared not before the age of 24 has been reached and at least 8 years have elapsed after discharge. Dr. Frey's prognostic table contains concise extracts of the contents of the files, arranged in 8, for the *Nachprognose* in 10, main sections, most of which are divided into several subsections or factors. To these extracts a statistical assessment is given according to a point system. The factors, or groups of factors, are of a fairly general nature (e.g. "personality type", "home milieu", "educational difficulties"), and their weight is assessed by the author in accordance with his views on their criminogenic significance, e.g. the factor "leisure milieu" receives a value (*Basispunktwert*) of only 5, early criminality, however, one of 35. The intensity with which each factor shows in an individual case is measured by coefficients ranging from 1 to 5, a highly criminogenic form of psychopathy, for example, receiving the coefficient of 4·5, a simple case of mental deficiency, however, only one of 1 or 2. By applying this table to a group of 75 cases correct results were obtained in 84% of the cases, whereas an intuitive prognosis made by the author without using the table achieved only 74·6% of accuracy. On the other hand, the author admits the presence of strong intuitive elements in his application of the table.

1.64 In a monograph entitled "*Pahantapaisuus Yksilön Sopeutumattomuuden Oireena*" (Delinquency as a Symptom of Later Social Maladjustment),[74] Dr. Rekki Saari, the Director of the Observation and Classification Centre at the Järvilinna State Reformatory in Finland, presents the results of

a follow-up study of 465 boys referred to the Centre in the years between 1921 and 1927. From the English summary the following data may be quoted: The average follow-up period was 15 years and 5 months, and the average age of the sample was 16 years and 10 months on leaving the Reformatory and 34 years and 2 months at the end of the follow-up period. The information given in the official records was supplemented by personal interview with each boy, his relatives, neighbours and local officials. It was found that within the follow-up period 51·8% of the ex-Reformatory boys had had no further convictions, 17·6% had become habitual criminals and the rest occasional offenders. About 80% had attained a fairly independent economic status. For purposes of research, the whole group was divided into those who had become recidivists, once-convicted and non-delinquents, and the correlations were worked out (Pearson's coefficient of contingency) between 21 background factors and subsequent criminal history. No marked correlations were found between any single of these factors and success or failure; in fact the highest correlation was ·21 (for a factor called "Number of abnormalities in environmental conditions"). Special care, he says, was taken "to eliminate spurious correlations". The correlations obtained were further checked by subdividing the recidivist group into two sub-groups, according to the frequency of reconvictions, in order to ascertain whether this would make the originally observed trends even more definite. Eventually, only 3 factors were regarded as showing clear correlations with the criterion, i.e. intelligence level, length of time in elementary and elementary schooling in the Institution. For a few other factors correlations were obtained similar to those given by the Gluecks in "One Thousand Juvenile Delinquents".

I.65   In a study of juvenile delinquency at Cambridge, England, one of the present authors presented some figures to show that there was "a fairly close correlation between the pre-probation history of the boys as expressed in bad points and their subsequent conduct", and that "from the case histories available to the Cambridge Juvenile Court an approximate forecast was possible as to the likely outcome of probation".[73] Using a scheme of bad and good points, it was found that of a group of boys who had been successful on probation 65·9% had either no bad points or not more than 10 out of a possible maximum of 86 bad points. On the other hand, of boys who became recidivists only 40%, and of boys who became persistent offenders only 18·2%, were in these two categories. It was stressed in that study, however, that in view of the small numbers of cases and for other reasons the construction of prediction tables had not been feasible.

I.66   In spite of the great variety of predictive techniques employed by different workers, this survey has also shown a considerable degree of uniformity of results. It cannot reasonably be expected, of course, that the same factors will invariably have the same predictive value regardless of time and place, of the age and other characteristics of the case material concerned. Moreover, even slight variations in the definition of an item may produce important differences in the results. To give but a few illustrations. Whereas according to Burgess and Tibbitts "emotional instability" is a favourable predictive category, other investigators, in particular the Gluecks, report a very high positive correlation between "mental distortion" or "marked adolescent instability" and recidivism. The "lone wolf" has a high violation rate in the Burgess and Tibbitts studies, whereas the Gluecks have found a significant positive correlation between gang membership and failure. On

the other hand, there is a fair amount of agreement with regard to such factors as work record, frequency of previous convictions, disciplinary record¹ in penal and reformatory institutions. The seriousness of the offence for which the offender had been committed to the institution is generally regarded as of little predictive value; for Burgess, greater seriousness even indicates likelihood of success; and sex offences have, ever since Warner, persistently shown the lowest rates of failure.

In view of the large number of prediction tables (or, better, "experience tables") are already available, in particular in the United States, it may be pertinent to enquire whether any practical use has been made of them. The answer is disappointing. The Illinois Division of Correction which, for the past 20 years, has been using the tables described by Ohlin (see above I.39) seems to have found no successor as yet. There is not only in the various Glueck studies no indication of any official acceptance of their tables, but the same is also true of more recent American publications.[78]

It can hardly be maintained that this lack of success in the field of the practical administration of criminal justice has been due to any exaggerated claims made by the theorists. On the contrary, in nearly every piece of prediction research so far published it has been stressed, firstly, that the applicability of experience tables to actual cases was dependent on their previous validation; and, secondly, that these tables were intended merely to supplement, but in no way to replace, the individual discretion and judgment of Courts, Parole Boards and penal administrators.

Interpreted in this limited sense, as a servant rather than as the master, the use of experience tables has been suggested mainly for the following purposes: to assist

    (a) Criminal Courts in their choice between the various methods of disposal, which, of course, presupposes the existence of tables capable of adequately discriminating between the latter;

    (b) Prison and probation officers in adapting their treatment to the specific needs of the individual offender as indicated by the tables;

    (c) Parole Boards and corresponding agencies in fixing the length of indeterminate sentences and in selecting the most effective form of after-care.

How far experience tables are capable of giving such assistance cannot be judged unless they are actually applied to suitably selected experimental groups of offenders.

SUMMARY OF CHAPTER I

S.I.1 A survey has been made of the principal prediction studies published in the past 30 years in the United States and Europe. Most of them are concerned with male parolees, only a few with ex-probationers and with women. Considerable progress has been made in the development of prediction techniques, due mainly to growing experience and further refinements in statistical method. Two techniques, each of them with numerous variants, dominate the field, the Burgess technique, using a large number of predictive factors without any weighting, and the Glueck technique, employing only a small number of factors and a weighting system. Special attention has been

devoted by various research workers to the following problems: how to avoid the use of overlapping factors and of subjective factors; how to reduce the size of the middle category of "doubtful" cases on which no statistical prognosis can be made; the need for individual interviews to supplement the information obtained from official files; and the length of the follow-up period required.

S.12 Although the work of the past 30 years has brought some of these problems nearer to their solution and has narrowed the area of controversy it cannot be claimed that unanimity has everywhere been reached. The now prevailing view favours, for example, prediction tables based on a few factors only (the Gluecks, Ohlin, Reiss and others), but there are still dissenters such as Burgess and Frey; it favours avoidance of subjective factors, but they have been used by Burgess, Tibhits, Ohlin, Reiss and Frey; it accepts the desirability of supplementary individual interviews, but important practical schemes such as the prediction procedure adopted by the State of Illinois have had to omit them as too expensive. Even from the almost universally shared experience that most relapses occur during the first months after discharge there is one exception reported by Vold. No effective way has been shown in previous studies of how to reduce the excessive size of the "doubtful" middle group and of how, without impairing the reliability of the tables, to make use of subjective factors so as to avoid the recent criticism by Burgess and Sellin that statistical prediction has so far been dealing only with the "external aspects of behaviour". Nor has the controversy between statistical and intuitive individual prediction been completely silenced, especially as the latter has occasionally produced results not greatly inferior to those of statistical prediction (e.g. in the Cambridge-Somerville Study).

S.13 Although validation studies, very rare in the initial stages of prediction research, are, in particular through the persistent efforts of the Gluecks, becoming more frequent, it cannot be said that a perfect validation of any of the existing tables has so far been achieved.

REFERENCES TO CHAPTER 1

Historical Survey of Prediction Studies in the Field of Criminology

(1) Many such follow-up studies are conveniently summarised in Walter C. Reckless, "Criminal Behavior" (1940), Chapter XX. *Law Enforcement* and Joseph P. Murphy, *Probation* and *Social Adjustment* (1932, New Brunswick, New Jersey, Rutgers University Press) is an important follow-up study of probationers with a special chapter on prognosis (Chapter XIV), but without prediction tables.

(2) A useful account of American prediction studies is given by Ellis D. Monachesi in 41 *Journal of Criminal Law and Criminology*, September–October, 1950.

(3) S. B. Warner, "Factors determining Parole from the Massachusetts Reformatory", 14 *Journal of Criminal Law and Criminology* (1923), 173–307.

(4) Hornell Hart, "Predicting Parole Success", 14 *Journal Criminal Law and Criminology* (1923), 405–413.

(5) Bruce, Burgess and Harno, "The Working of the Indeterminate Sentence Law and the Parole System in Illinois" (1928), Chapters XXVIII and XXX.

(6) op. cit., p. 246.

(7) op. cit., p. 248.

(8) See the list given by George B. Vold, "Prediction Methods and Parole" (1931), p. 16.

(9) Sheldon Glueck and Eleanor T. Glueck, "500 Criminal Careers" (1930, New York, Alfred A. Knopf).

(10) Monachesi in the paper quoted above under (2) on p. 274.

(11) "500 Criminal Careers", p. 7.
(11a) In "Later Criminal Careers", p. 1, the beginning of the investigation is dated 1925.
(12) op. cit., p. 146.
(13) op. cit., p. 150.
(14) op. cit., pp. 175-6.
(15) pp. 3 et seq.
(16) pp. 7 and 85, 95 et seq.
(17) pp. 101 et seq.
(18) For the exact definitions see pp. 187 et seq.
(19) pp. 356 et seq.
(20) pp. 381 et seq.
(21) Sheldon and Eleanor Glueck, "Later Criminal Careers" (1937, New York, The Commonwealth Fund; London, Humphrey Milford, Oxford University Press).
(22) See in particular Chapter XI.
(23) Chapter IX.
(24) Sheldon and Eleanor Glueck, "Criminal Careers in Retrospect" (1943, New York, The Commonwealth Fund).
(25) op. cit., pp. 227 et seq.
(26) Sheldon and Eleanor Glueck, "One Thousand Juvenile Delinquents" (1934, Cambridge, Mass., Harvard University Press).
(27) Sheldon and Eleanor Glueck, "Juvenile Delinquents Grown Up" (1940, New York, The Commonwealth Fund).
(28) See Chapter XXI.
(29) Chapters XIII-XVIII.
(30) Sheldon and Eleanor Glueck, "Five Hundred Delinquent Women" (1934, New York, Alfred A. Knopf).
(31) See Appendices A and B.
(32) See pp. 341, 344, 345 et seq.
(33) See p. 306.
(34) pp. 286 et seq.
(35) p. 365.
(36) Sheldon and Eleanor Glueck, "After-conduct of Discharge Offenders" (1945, London, Macmillan and Company, Limited.)
(37) Sheldon and Eleanor Glueck, "Unraveling Juvenile Delinquency" (1950, New York, The Commonwealth Fund). Chapter XX deals with prediction. See also the simplified version, "Delinquents in the Making" (1952, New York, Harper and Brothers) and Mrs. Eleanor Glueck's article, "Predicting Juvenile Delinquency" in 2 British Journal of Delinquency, April, 1952.
(37a) See the definitions in "500 Criminal Careers", pp. 185, fn. 25 and 200; "Later Criminal Careers", pp. 125, 293 and 297.
(38) "After-conduct of Discharge Offenders", pp. 66, fn. 1.
(39) "Criminal Careers in Retrospect", p. 221, fn. 15.
(40) "Criminal Careers in Retrospect", p. 221. See also "Five Hundred Delinquent Women", p. 288.
(41) George B. Vold, "Prediction Methods and Parole" (1931, Hanover N.H., Minneapolis, Liverpool, The Sociological Press).
(42) op. cit., pp. 58 and 67.
(43) pp. 34-5.
(44) In "Criminal Careers in Retrospect", p. 219, fn. 10, the Gluecks point out that this criticism refers only to the original construction of the tables, whereas their application, in view of the smaller number of items, involves less work than the Burgess method.
(45) ibid., pp. 76 and 105.
(46) George B. Vold, "Prediction Methods Applied to Problems of Classification within Institutions", 26 Journal of Criminal Law and Criminology, July 1935, pp. 202-9.
(47) Ello D. Monachesi, "Prediction Factors in Probation" (1932, Hanover N.H., Minneapolis, Liverpool, The Sociological Press).
(48) Clark Tibbitts, "Success and Failure in Parole can be predicted", 22 Journal of Criminal Law and Criminology, May, 1931; "The Reliability of Factors used in predicting Success or Failure on Parole", ibidem, March, 1932.
(49) Walter Webster Argow, "A Criminal-Liability Index for Predicting Possibility of Rehabilitation", 26 Journal of Criminal Law and Criminology, November, 1935.

(50) Norman Fenton, "The Delinquent Boy and the Correctional School" (1935, Claremont Colleges Guidance Center, Claremont Colleges Library). See in particular Chapter X.

(51) pp. cit., pp. 150 and 153.

(52) Ferris F. Laune, "Predicting Criminality" (1936, Chicago, North Western University Studies in Social Sciences, No. 1).

(53) H. Ashley Weeks, "Predicting Juvenile Delinquency", 8 American Sociological Review, 1943.

(53a) "Attorney-General's Survey of Release Procedures. Volume IV: Parole." (Department of Justice, Washington, 1939). Chapter XI and Appendix A.

(54) Lloyd E. Ohlin, "Selection for Parole, A Manual of Parole Prediction" (1951, New York, Russell Sage Foundation).

(55) According to Ohlin, p. 46, Illinois is still the only State of the U.S.A. which possesses such a routine prediction system.

(56) Definitions of these factors are given in Appendix F of Ohlin's book.

(57) Morris G. Caldwell, "Preview of a new type of Probation Study made in Alabama" (15 Federal Probation, June, 1951).

(58) Albert J. Reiss, "The Accuracy, Efficiency and Validity of a Prediction Instrument", 61 American Journal of Sociology, May, 1951, pp. 552–561.

(59) Albert J. Reiss, "Delinquency as the Failure of Personal and Social Controls", 16 American Sociological Review, April, 1951, pp. 196–207.

(60) Edwin Powers and Helen Witmer, "An Experiment in the Prevention of Delinquency". The Cambridge-Somerville Youth Study (1951, New York, Columbia University Press).

(61) See Powers-Witmer: Chapter XVIII "Can Delinquency be predicted?"

(62) "The Prediction of Personal Adjustment" by Paul Horst et al., Social Science Research Council Bulletin 48 (1941, New York).

(63) Schneider and La Grone, "Prediction of Behaviour of Civilian Delinquents in the Armed Forces", 28 Mental Hygiene (1944), 456–475.

(64) "Recidivism at the Hawthorne-Cedar Knolls School. Predicted vs. actual outcome for delinquent boys". By Bertram J. Black and Selma J. Glick. Research Monograph No. 2, Jewish Board of Guardians. New York, A.N.Y. (1951).

(65) Richard E. Thompson, 43 Journal of Criminal Law, Criminology and Police Science (1953), pp 451–70. See also 2 British Journal of Delinquency (April 1953).

(66) Franz Exner, "Kriminalbiologie Berücksichtigt über ihre Reiche nach America" (Berlin, 1935). On German prediction studies in general see Franz Exner, "Kriminologie", (Springer-Verlag, Berlin-Göttingen-Heidelberg, 1949). Chapter 32.

(67) Robert Schädt, "Ein Beitrag zum Problem der Rückfallsprognose" (München, 1936). This book was not available, and the account given above is based on information derived from Nos. 66, 68, 69, 70, 72.

(68) Hans Trunk, "Soziale Prognosen an Strafgefangenen, 28 Monatsschrift für Kriminalbiologie und Strafrechtsreform" (1937), pp. 209–27) with commentary by Exner, pp. 227–30.

(69) Gerecke, "Zur Frage der Rückfallsprognose, 30 Monatsschrift für Kriminalbiologie und Strafrechtsreform" (1939), pp. 83–88.

(70) Wilhelm Meywerk, "Beitrag zur Bestimmung der sozialen Prognose an Rückfallsverbrechern, 29 Monatsschrift" (1938), pp. 422–5.

(71) F. Schwaab, "Die soziale Prognose bei rückfälligen Vermögensverbrechern". This book was not available, and the references are taken from Exner, "Kriminologie" (above No. 66).

(72) E. F. Kohnle, "Die Kriminalität entlassener Fürsorgezöglinge und die Möglichkeit ihrer Erfolgsprognose". Kriminalistische Abhandlungen No. 33 (1938), Leipzig.

(73) Erwin Frey, "Der Frühkriminelle Rückfallsverbrecher. Criminalité précoce et Récidivisme". Schweizerische Criminalistische Studien, Vol. 4, Basel, Verlag für Recht und Gesellschaft (1951). See on this book the "Critical Notice" in 3 British Journal of Delinquency (October 1952), pp. 132.

(74) Erkki Saari, "Palantaquisus Väärläs Sopeutmattomuuden Oirerna, Jyväskylä" (1951).

(75) Hermann Mannheim, "Juvenile Delinquency in an English Middle-town" (International Library of Sociology and Social Reconstruction. 1948. Routledge and Kegan Paul, London).

(76) See the authoritative survey of recent developments in the American parole system by Dr. George G. Killinger in "Contemporary Correction", edited by Paul W. Tappan (McGraw-Hill Book Company, Inc., New York-Toronto-London, 1951), p. 379.

where the need for the construction and application of prediction tables is stressed, but no reference is made to any present use. Charles H. Z. Meyer, in "A Half Century of Probation and Parole" (The Journal of Criminal Law, Criminology and Police Science, Vol. 42, No. 6, March–April, 1952, p. 727) complains that probation and parole officers do not use such tables wisely, but gives no indication of where and how much they are actually being used. In "Correctional Research", Bulletin No. 1, January 1953 (published by the United Prison Association of Massachusetts): "What is new in Parole", Ohlin's claim that "Illinois has the distinction of being the only state in this country in which a routine system of parole prediction has been established" is reproduced without contradiction. Moreover, Ohlin's own discussion of the possibility of a "master experience table" for use by the Parole Boards of the other states of U.S.A. (pp. 64 et seq.) also seems to confirm that no experience tables have so far been employed outside Illinois.

After this had gone to Press, we have been informed by Professor Norman S. Hayner of the University of Washington, Seattle, that the State of Washington Board of Prison Terms and Paroles, of which he is a member, has for the past few years been using prediction techniques in an experimental way and that it is hoped to use them in the near future as a matter of routine.

CHAPTER II

The English Borstal System in 1946-7

II.1   In this Report, the history and main features of the English Borstal system are taken as generally known, and the following remarks will, therefore, be confined to those aspects which are of a direct significance for the understanding of the background of the present study.   Special attention will be paid to conditions prevailing during and immediately after the war and at the time when the task concerned were passing through one of the Reception Centres and Training Institutions.   Our summary is based mainly on the data given in the Annual Reports of the Prison Commissioners and in their pamphlet "Prisons and Borstals", on additional information on some specific points, supplied by them at our request, and also on our personal knowledge of the system.   Reference should also be made to private publications such as Mr. L. W. Fox's book, "The English Prison and Borstal Systems" (1952); to William Healy and Benedict S. Alper, "Criminal Youth and the Borstal System" (New York, The Commonwealth Fund, 1941); to Miss Margery Fry, "The Borstal System" (Chapter IX of "Penal Reform in England, English Studies in Criminal Science", Second Edition, 1946), and to an unpublished thesis by Mr. A. G. Rose, "Borstal Boys and the Borstal System" (1951), made accessible to us through the courtesy of the author.*

II.2   As our investigation is limited to lads, the female side of the system will not be considered.

II.3   At the outbreak of the Second World War, nine Institutions were available for lads: [1]

(These three Institutions are of the so-called closed type.)

   Borstal, Rochester, Kent: built as a prison, "the original Borstal, with three 'cellular' houses, one dormitory house and one more modern hut house, accommodation for 830";

   Feltham, Middlesex: "an old Reformatory School, taken over as a Borstal Institution in 1911, four dormitory houses, one 'cellular' house, accommodation for 350";

   Portland, Dorset: "a former convict prison, converted and adapted for use as a Borstal Institution; opened as such in 1921, four houses, 'cellular' bedrooms, no dormitories, the fifth house was badly bombed in 1940, accommodation for 820";

   Camp Hill, Isle of Wight: "originally built as a Preventive Detention Prison; taken over as a Borstal, 1932-9, and again in 1946; two large houses (70 each) and four smaller (45 each), all 'cellular'; accommodation for 820";

   Sherwood, Nottingham: "formerly the Nottingham (or Bagthorpe) Local Prison; a 'cellular' block, with hutted association rooms added; accommodation for 160";

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* Published as "Five Hundred Borstal Boys", see Appendix VIII.

(These four Institutions are of the so-called open type.)

Lowdham Grange, Nottinghamshire: "a large Institution built to our own design by the boys themselves, started in 1930, the houses are not unlike residential school houses with association rooms downstairs and dormitories upstairs; accommodation 240";

North Sea Camp, nr. Freiston, Boston, Lincolnshire: "a hutted camp on the edge of the Wash, 7 miles from Boston; its original function was to reclaim land from the sea; accommodation for 180";

Hollesley Bay, Woodbridge, Suffolk: "a large estate taken over from the L.C.C. with nearly 1400 acres of fruit and general farm land; three widely separated hutted camps and the original colony building form 'houses'; accommodation for 320";

Usk, Monmouthshire: "a small county prison in use to house the boys on their first arrival whence they pass to a hutted camp at Prescoed, 3 miles away; accommodation for 150".

II.4 In addition, there were the Reception Centre at Wormwood Scrubs Prison and the Revocation Centre at Wandsworth Prison, both in London. The total number of lads detained was over 2100.

II.5 The changes necessitated by the war and described in the Annual Reports of the Prison Commissioners and in the section on England and Wales in "The Effects of the War on Criminality", published by the International Penal and Penitentiary Commission (1951), may be summarised as follows:

II.6 Institutions: Some of the existing Institutions, notably Lowdham Grange and Camp Hill, had temporarily to be cleared of Borstal boys and used for the reception of prisoners. Usk was handed over to the military authorities. A large part of Rochester was taken over by the Admiralty, and some of the buildings at Portland were destroyed by bombs. Feltham, which remained a Borstal, became in addition the prison for young prisoners from London and also the Borstal Reception Centre.

II.7 Inmates and staff: It had been decided before the war that, in order to reduce the population and to facilitate their recruitment by the Services, all Borstal inmates who had served not less than 6 months should be released forthwith on licence. This meant the immediate discharge of 1563 lads, i.e. approximately two-thirds of the total. Altogether, 2005 lads were discharged between September and December 1939, as against 919 in the whole year 1938. As the Commissioners wrote, "those released were the seniors in the institutions and with them there disappeared overnight all the carefully built-up tradition of 30 years. Those left behind had not had time to absorb it, and with no seniors to set the tone it was idle to expect stability and co-operation from beginners fresh from the Courts against a national background of excitement, dislocation and stress."[2] Moreover, nearly one half of the housemasters and many disciplinary officers joined the Forces.

II.8 Soon, however, there began a steady influx of new committals, amounting to about 1300 to 1500 annually during the war years, and the resulting pressure on accommodation and staff made a substantial reduction in the average period of training inevitable. Fortunately, the Institutions the use of which had been temporarily lost were recovered in 1940 and 1941, and training, though with a smaller and less experienced staff, could be resumed on traditional lines. The average period of detention rose again from its lowest level of 10·1 months in 1940 to 15·7 months in 1944.

II.9 Even so, the coming of peace did not result in an immediate return to normal conditions. In the words of the Commissioners, "in the summer of 1945 the pressure of increased population on a seriously diminished and overstrained staff had strained the machine almost to breaking point. In 1946 the administrative difficulties were perhaps even greater, since on the basis of this wholly inadequate number of experienced officers, which with the end of the war was diminishing even more rapidly through retirements, it was necessary to build up a very large new staff at the same time as the even greater increase in population was adding to the pressure in existing establishments and forcing the opening of numerous additions."[3] Nevertheless, towards the end of the year 1946, the return of housemasters and officers from the Forces and the opening of the new Institutions at Gaynes Hall, Huntercombe and Hewell Grange and the reopening of the former Borstal at Camp Hill made it possible to cope with a rapid rise of population from some 1880 in 1945 to over 8100 in August 1946, and "there was no pressure to discharge any individual before he was considered to be ready".[4] Thanks to the establishment of a second Reception Centre at Latchmere House, lads could be removed from the local prisons, where they had been arrested and kept for trial, to a Reception Centre within a few days after committal. For the beginning of the period relevant to the present enquiry the system presented the following picture:[50]

II.10 The existing twelve Training Institutions were divided into open and closed and also into Institutions for mature and for immature types of lads:

I. CLOSED: (1) mainly for mature lads: Sherwood, Portland, Stafford
            (the latter with a temporary admixture of some young
            and immature lads).

          (2) mainly for immature lads: Feltham, Camp Hill.

II. OPEN: (1) mainly for mature lads: North Sea Camp, Hunter-
            combe, Usk.

          (2) mainly for immature lads: Lowdham Grange, Hollesley
            Bay, Gaynes Hall, Hewell Grange.

In addition there was Gringley Camp, a satellite of Sherwood.

II.11 It will be seen that the new Institutions were all of the open type. The following data, supplied by the Commissioners, may throw some further light on the characteristic features of the various Institutions and their inmates at the time in question:

CLOSED

1. MAINLY IMMATURE

Camp Hill: young ex-Approved School lads and likely absconders from open conditions; reopened in October 1946, with 50 "best" selected boys who did very well. On this foundation the subsequent, not so good, population was built up of lads who would previously have been sent to Rochester.

Feltham: subnormal and borderline cases, immature, physically retarded, illiterate and semi-illiterate. The changing over from prison to Borstal conditions in April 1946 presented difficulties in adjustment for staff and lads.

2. MOSTLY MATURE

Portland: (a) mature lads with several previous convictions; (b) those convicted of more serious offences; (c) higher age groups with second and third sentences of Borstal detention. The atmosphere was one of rigid discipline, activities controlled, less co-operation on the part of the lads.

Sherwood: mature lads of the "tough", "gangster", "hooligan" variety; difficult and restless.

OPEN

1. MAINLY IMMATURE

Lowdham Grange: dull lads, unable to cope with personal problems, more foolish than vicious, atmosphere more of a school than a penal institution.

Hollesley Bay: young, immature in criminal experience, but at the same time lads of potential self-reliance.

Gaynes Hall: good type of lad, intelligent and physically fit, with few previous convictions; pioneer spirit, staff and lads working as a team when the Institution was being built up.

Hewell Grange: better type lad, good enthusiastic pioneering spirit.

2. MOSTLY MATURE

North Sea Camp: physically strong, but intelligence below average; general restlessness, resulting in high rate of absconding, arising from deliberate policy of making lads soldier on chores and rough labour before advancement to regular training.

Huntercombe: fairly mature type, no trades taught, lads fully employed adapting the place from a wartime camp to an open Borstal.

Usk: fairly good type; attitude good in the main, but the severe winter made things difficult for transport between camp and Institution.

II.12   In addition to age, physique, intelligence and maturity, criminal history and tendency to abscond, a number of other factors were taken into account for the allocation of lads, such as the vocational and medical facilities available, proximity of the lad's home, membership of a gang which had to be divided, and others.

II.13   The average time served was at

Camp Hill: 20 months
Borstal and Feltham: 19 months
Portland: 18½ months
Lowdham Grange and Hollesley Bay: 17¼ months
Sherwood: 15 months
Huntercombe: 14-15 months
North Sea Camp: 13 months, after March 1947 extended to 18 months
Usk: 11-12 months.

II.14   Within these averages there was, however, considerable elasticity with the individual Institutions, ranging for one of them from an earlier discharge in 9 months to a latest in 2 years and 8 months.(6)

II.15   The following trades were taught at these Institutions.

Borstal: Carpentry, bricklaying, farmwork, painting and decorating, shoe repairing.

Camp Hill: Tinsmithing.

Feltham: Carpentry, sawmill, fitters, farm, market gardens, painting, bricklaying, shoemakers.

Gaynes Hall: At first general labouring setting the estate in order, etc. Towards end of period, bricklaying, painting and decorating, saddlery and harness making had been started.

Lowdham Grange: Bricklaying, painting and decorating, carpentry, wood machine work, farming, elementary cooking.

Hollesley Bay Colony: Farming, gardening with horticulture, nursery and greenhouse sections, painting, bricklaying, shoe repairing.

Huntercombe: No trades taught. All fully employed adapting the place from a wartime camp to an open Borstal.

Hewell Grange: No trades taught.

North Sea Camp: Marsh reclamation and farming.

Sherwood: Carpentry, woodworking, machining, shoemaking and repairs, bricklaying and farming.

Portland: Carpentry, engineering fitting, blacksmith, painting and decorating, tailoring, shoe repairing, cooking, farming, laundry.

Usk: No trades taught. Cookery course, but farming was a major occupation.

II.16   An important development in this field was the increased emphasis on training as against exclusive "production" in the workshops and on the farms. A considerable number of Vocational Training Classes were started during the year, based on the Ministry of Labour and National Service syllabus for the trade,[7] and in the Report for 1947 a considerable further expansion of the scheme is noted.[8]

II.17   The rates of failure, i.e. the percentage of lads reconvicted within 7 years of the beginning of the year of discharge, or where less than 7 years have elapsed, up to the end of the year 1952, are as follows (bearing in mind that, as the table shows, slightly less than half of the failures were reconvicted once only):

	Reconvicted once only	Reconvicted twice or more
	%	%
1937	20·4	28·4
1938	13·7	18·5
1939 (Jan.–Aug.)	19·8	22·4
1939 (Aug.–Dec.)	21·9	24·6
1940	21·6	30·5
1941	20·0	28·3
1942	21·4	26·8
1943	22·8	34·9
1944	25·0	33·7
1945	22·1	35·7
1946	22·4	37·0
1947	25·2	38·5
1948	25·8	24·1
1949	29·7	20·6
1950	28·4	—
	24·0	28·6

II.18 It will be noted that the lowest rate of success refers to lads discharged in 1946, i.e. in the year when the first of the lads covered in the present investigation entered the Institutions. Although there was some improvement in subsequent years, this was still a period when, in the words of the Prison Commissioners, "the system had still not recovered from the sudden expansion of the post-war years and the great majority of the staff had little or no experience".[3] To illustrate the first of these two points, it might be added that between November 1945 and August 1946 the Borstal population had risen from some 1380 to over 3100[20] and that committals had gone up from 1386 in 1944 to 2166 in 1945 and 2109 in 1946. After that peak was reached they declined steadily to 1812 in 1949 to rise again in recent years.

II.19 With regard to the period on licence after discharge it is of interest to note that nearly 50% of the discharges were drafted to the Services in 1946, and the view is expressed in the Annual Report for that year that "no doubt a comparison of results would show the ex-Borstal Serviceman in a more favourable light than his ex-Borstal civilian contemporary.[20a] This may be partly accounted for by the superiority in physique and mentality of those who pass as Grade I or Grade II categories into Service training units, but there is another and even more important factor to be remembered. A large proportion of Borstal's population comes from unsatisfactory homes. . . . To such, the Army offers the security of a training period away from the old environment and an opportunity to gain self-respect and a 'character' which on demobilisation, can be produced openly at any Labour Exchange or shown to any employer."[11] It is also stated in the same Report that while the problem of employment was not too difficult during the period, except for those mentally or physically seriously handicapped, it was far from easy to find accommodation for the homeless ex-Borstal lad. In view of the new training courses initiated in 1946 a further improvement of the employment position was expected. Regular visits from members of the staff of the Borstal Association[12] to all Training Institutions served to establish early contacts with the lads, but attention was drawn to the fact that the staff of the Association had not been increased since 1939, although its work had more than doubled.

SUMMARY OF CHAPTER TWO

S.II.1 In this chapter the Borstal system for lads is briefly described as it was after the war and in particular at the time when the lads whose files form the material of the present investigation were passing through the Reception Centres and Training Institutions.

Attention is drawn to the difficulties created by the war and to some extent persistent during the first post-war years, such as the sudden discharge of the majority of the lads at the outbreak of hostilities, the closing and bombing of Institutions, the enlistment of many officers, and the rapid increase in population after the war. A list of the Institutions then existing is given, and their characteristics and their places in the classification system are described.

REFERENCES TO CHAPTER II

(1) Details taken from the Annual Report of the Prison Commissioners for 1946, pp. 52 et seq.

(2) Annual Report for the years 1939–41 (1946), p. 50.

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(3) Annual Report for the year 1946, pp. 8–9.
(4) Annual Report for the year 1946, p. 51.
(5) Ibidem, p. 55. See also H. Mannheim and John C. Spencer, "Problems of Classification in the English Penal and Reformatory Systems" (I.S.T.D. Publication), 1949, pp. 12 et seq.
(6) Annual Report for the year 1947, p. 58.
(7) Annual Report for the year 1946, p. 51.
(8) Annual Report for the year 1947, p. 55.
(9) Annual Report for the year 1951, p. 75.
(10) Annual Report for the year 1946, p. 51.
(10a) As will be seen in our Chapter V, our own findings agree with this in general, but show that there are interactions due to other factors.
(11) Annual Report for the year 1946, p. 56.
(12) The Borstal Association, now the Borstal Division of the Central After-Care Association, is the body responsible for the supervision and after-care of Borstal lads during their period of licence after discharge. Borstal lads are on licence until the expiration of 4 years from the date of their sentences.

CHAPTER III

The Basic Ideas Underlying the Project
and its Purposes

III.1 It will be clear from our chapter on the history of criminological prediction that statistical methods have played an important part in the past. The present project is no exception. It is, however, our aim to present our material and findings in such a way that all the essential features may be clear to those with no special training in statistics. Before we discuss the results or even the purposes of this study we must, therefore, attempt to state in simple terms the possibilities of the statistical methods we have used. We must also say something about the ideas underlying the statistical theory and show how closely these relate to familiar concepts. In doing this we may have to offend those who would require a purist approach, since we shall have to use terms which have both a special technical and a general meaning. We shall attempt to become more precise in the use of terms as the explanatory and descriptive discussion develops. For example, we have adopted the conventional term of "prediction" tables where we would have preferred to distinguish between "experience" and "prediction" tables by the use of experience tables for prediction purposes, whilst these terms are also capable of some improvement.

PART I

BASIC IDEAS

THE ORIGINAL ASSUMPTIONS

III.2 The starting point for our design was simple enough. We had only the following information and objective:

(a) Some lads return to crime after Borstal Training, some do not.
(b) The majority who return to crime do so within a short period from release.
(c) Recorded in Borstal files and in other places were data regarding the past criminal career and certain other facts which were considered to be of use in deciding treatment and other administrative actions regarding each case.

III.3 We were required to decide how best the information available (c) might be used to indicate likelihood of success or failure (a). Since the period of testing for each lad could not be too long, we invoked (b). We made no selection of the data but used every item which was available in the files in a form which could be used. Some derived data were also used, but no hypotheses were formed before the project began. At times we depart from our basic task of showing how the available data might best be used with the above objective in mind to illustrate uses of the solution derived. These illustrations are not essential features of the design.

III.4 We could not collect from primary sources any of our own data for this project. This fact is to some extent the strength and a limitation of this study.

The strength lies in that the results we derive are reproducible by others and no features of our results are due to our own skills or lack of skills in dealing with cases. The limitation is that some more data might have resulted in better prediction.

THE CASE STUDY AND THE STATISTICAL METHOD

III.5   Perhaps the most similar study in the past to the project we report is the research of Sheldon and Eleanor Glueck[1] (to which we have already made reference in our first chapter) reported in their book "500 Criminal Careers". As they show in this work they were able to classify delinquents according to their probability of making good or of becoming recidivists. The Gluecks were, like others before and after them, able to show that offenders from some types of backgrounds and with certain characteristics tended far more often than others to return to crime. Not that any one offender could be said to be sure to be apprehended again, but that offenders with certain characteristics would be found more often amongst those who were committed for a further term of imprisonment than others. They also attempted to add together these characteristics which were associated with poorer risks so that a "score" was obtained.

III.6   It is the concept of probability of failure associated with earlier "prediction" studies and the present project which those unfamiliar with statistics may find difficult to appreciate. They may feel deeply concerned that because a particular case falls into a post risk category some action may be taken which, although correct for the group to which the case belonged, may be wrong for him. They will argue that if the group consists of lads with 10% chance of success, the prognosis will be "wrong" in 1 in every 10 cases. This idea is very real to those whose life is devoted to making the welfare of individuals and we must make some attempt to resolve this difficulty.

III.7   Suppose the statistical methods of this study provide a class of Borstal boys where the likelihood of success is 7 out of every 8. (This is, in fact, the case as will later be shown.) Suppose also that 8 cases are examined from this category, then one is *expected* to be a failure. But which one the statistics do not and cannot indicate. If they could, the risk class would no longer be a 7-out-of-8 but a 7-out-of-7 class; 100% correct. Those accustomed to case history methods will be inclined to regard the one failure in every 8 who shows up in the best risk group as being "incorrectly classified by the statistics". To a limited extent this attitude may be accepted, and we shall attempt to show when and how this may be so. But the one failure in 8 does not prove the statistics wrong; on the contrary, it proves them right!

III.8   The conflict between the concepts of probability, and to use a term favoured by some philosophers and psychologists, "idiographic"[a] approaches suggested in the previous paragraph is more apparent than real. It may arise because social scientists in recent years have turned to statistics to help them to discuss the validity of their data and sometimes to interpret it, but they have usually used statistical methods to assist without regard for the basic philosophy of statistics. They have thus swallowed without qualms (perhaps without noticing) a large number of philosophical problems of probability.

III.9   Let us embark upon what may, perhaps, be a difficult subject to some of our readers by asking now the statistical methods differ from or compare with idiographic (e.g. case history) methods.

STATISTICAL METHODS AND EXPERIENCE

III.10 When an individual case is considered the person considering the case has an objective in mind. This consideration is purposeful. To be analogous with the present study this purpose would be the attempt to decide whether the particular case was likely to become a success or failure after Borstal training, using only information available before or during such training. Whether this is the only or particular objective does not matter, it is important only to assume that an objective exists. This objective becomes, when translated into the statistical jargon, the "criterion."* The statistical models can take different criteria in the same way as the person studying a case can do so with different objectives.† Let us agree to follow one illustrative "criterion" or objective. The aim is to decide to which of two classes a particular case belongs; whether he is a likely success or a likely failure. It will doubtless be agreed that whether the statistical or any other method of classification is used the likelihood of every lad being correctly allocated by the prognosis is remote. The statistical method, however, expresses the likelihood in terms of numbers, whilst the idiographic methods may make pronouncements like "almost certain to fail", "difficult to assess, may or may not succeed" or "almost certain success." What level of probability is associated with "almost certain" is unknown and it will differ from one assessor to another. It is not in this that the differences in concepts arise, but in the system of interpreting what information the case history provides and how this is done. How does the intuitive assessor go about his task? We may, perhaps, agree that he draws upon his past experience in what he regards as analogous cases. In his mind he considers factors which are in his experience associated with success or failure. He notes whether or not these factors appear in the individual case and he attaches some weight to each, giving good points for some and bad points for others and ending with a qualitative statement at the end of what is in essence a quantitative series of judgments. The statistical methods are exactly similar to this. In the intuitive cases we do not know upon how many cases the judgment is based, nor do we know how representative the experience of any one assessor may be. By the statistical approach we may define exactly the sample which affords the basic experience and can ensure that it is completely representative. Presumably intuitive assessments will be the better the more the experience and the wider the experience of the assessors, but no two assessors can have the same experience upon which to draw. It may not be surprising then that some assessors are better predictors than others. Not only does the basic experience differ between assessors but the weights attached to each item are derived from within the minds of the individual assessors and are not, therefore, reproducible by others. The weights to be attached to the items from past experience in the statistical approach are determined as the "best" in terms of the experience upon which they are based, and are, of course, reproducible by others.
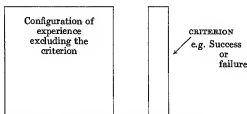
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* This term to indicate the variable or attribute to be predicted, and the term "factors" to indicate the items used in making the prediction, are preferred to the more usual statistical terms "dependent" and "independent" variables, since confusion might then arise in that not all the items (factors or criteria) are variables; some being attributes and the main purpose of the study to discriminate between two classes.

† We are not concerned here with "descriptive statistics".[(1)]

III.11   Both the statistical approach and the intuitive are working, along the same lines using similar techniques—obtaining experience and condensing it and then examining other cases and comparing these with the experience and making statements of future outcomes accordingly.

III.12   Perhaps those who are likely to have the best results in treating delinquent behaviour are those who are able to believe the best of their cases. If this is so, the good therapist is an optimist and may not, therefore, be the best person for prognosis. The statistical methods are not concerned with therapeutic measures in this study. Each task when dealt with by the statistics is self-contained and its configuration of coverage may be restricted or extended at will. In the intuitive systems we cannot separate within the mind of the assessor the various aspects of his personality, and his optimism, desirable in one field may be undesirable in another.

III.13   The detailed procedure of the statistics will become clear as we describe the project further in later chapters. In essence we obtained our experience from 700 cases of Borstal boys. Amongst these cases we had to have experience of the various criteria which might be used. If we had been required to say anything about different forms of treatment we could not proceed without data relating to the forms of treatment. The data form a configuration of factors and we may *not* treat them separately. No lad, for example, will have been sent to an Approved School or put on probation in the past without some events (also in the configuration of data) having led to this result. The statistical methods put as much of the data as possible together in one configuration and the criterion in another, thus:

III.14   We then find the "best" way of weighting the items in the first box (matrix) so that we may derive the optimum estimate of the second box. We have to limit ourselves for various reasons to a result which ends in an addition sum. Obviously which items from the total experience (data) we write in the criterion column is a matter of choice and we may change this at will. In the single case we are using for this discussion we have limited ourselves to sorting of the "sheep" from the "goats". If we had experience which defined the degree of "sheepishness" and "goatishness" we could operate similarly, or we could define the better of two forms of treatment or the best of several. We require only that we have sufficient experience for the past results to be unlikely to have arisen by chance and hence unlikely to be of value for prognosis in the future. Having found the "best" way in which the criterion related to other facts in the past experience, we may proceed to the validation processes.

III.15   Validation is desirable since the criterion experience is (in these sorts

of problems) available at a later date than the remainder of the experience. We need to test whether time trends are likely to have altered the value of our experience. We have obtained our experience tables, and we need to test these for use as prediction tables. If time trends have not seriously affected our results we may assume that predictions may be made from the experience, provided that we are always alive to the likelihood of time changing the situation in the future.

III.16 The only real difference between the intuitive method and the statistical is in the fact that statistics cannot deal with "intangibles". Any item which could be claimed to be definable and communicable could be used in the statistics. The importance of intangibles and the undefinable and incommunicable will be discussed later with some examples.

III.17 The preceding discussion of the statistical methods which may be used to solve the kind of problems with which we are concerned is completely general and has been made specific only for the purpose of illustration. We must, however, keep to the specific problems and methods of this study and relate the general theory to the present study.

III.18 We first needed experience data and required that this should be as recent as possible. The fact that we needed experience of the criterion (success/failure) meant that some compromise was necessary. Accordingly, we selected a sample of 1 in every 3 entrants to Borstal in 1946–7. We defined "success" as the absence of further conviction (other than simple fine) up to 31st August, 1951. This meant that the lads had on average a testing period of $3\frac{1}{2}$ years from release from the Institution.* A total sample of just over 700 cases was available by these methods and within our financial resources. For purposes of the major analyses, the sample was divided into two parts—the successes and the failures. From the resulting data we† were able to give weights to each item of information so that we maximised the *number of cases* correctly allocated to the two classes. In many cases the weights given to the items were so small as to be insignificantly different from zero. This means that they do not appear in our tables. In fact if the *other* data are considered these items should not be considered since by so doing the precision of the equation to specify and discriminate the two classes would be diminished.

DISCRIMINATION AND CLASSIFICATION

III.19 We have said that the main task of this study was to separate the "sheep from the goats" and that each case could be defined as either a sheep (success) or a goat (failure). We need now to show what this process of discrimination involves and discuss how this task might relate to other criteria which allowed of degrees of success or failure. In every-day terms the two-class specification implies that any case where the prognosis was "likely failure" and the lad was in fact a "failure" we may say that the prognosis was "correct". Similarly, if a prognosis was "likely failure" and the

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* The effect of the follow-up period on the results is discussed in detail in Chapter VI. A fixed date was used for economic reasons. It may be assumed to provide results no different from those which would have been derived from a constant follow-up period. Later we shall separate fixed follow-up periods of less than the maximum duration and show this to be true.

† The term "we" is perhaps misleading here. The weights are, in fact, derived by a system of equations which maximise the discriminating power of the data. No subjective judgment enters.

lad had, in fact, a "success", the prognosis might be said to be "wrong". But the estimate of the probability of the lad being a failure might be, say, 51%, or 49%. In the former case the prognosis would be "likely failure" since he had more chance of failure than success (1%) whilst in the latter case the 1% difference would mean classification as likely success. The case might be correctly assessed as having slightly more chance of success than of failure, but the prognosis has about equal chances of being either right or wrong. Given, say, 100 cases with a probability of 51% chance of success we should *expect* 49 cases to be wrongly classified if the estimate of the probability was *correct*. This illustrates the principle underlying this form of discriminant analysis. If any individual's chance of success is estimated as greater than 50%, he goes to the success side, if less than 50% to the failure side. No other situation is open within this restricted framework of two classes. By this system we shall have the expectation of classifying correctly the greatest number of cases. Only within this restricted model can we use the concept of a prognosis being right or wrong whether the prognosis is made statistically or by any other means. If, however, we admit of probability or degrees of certainty of prognosis the concept of right or wrong classification has no meaning in this form.

III.10 It is, however, convenient to use the simple two-class system and the idea of a right or wrong prognosis for most of our work. Very much later in this report we shall elaborate on this model. Until then we shall attempt to predict success or failure from factors in the information matrix (data available at committal and data available during training) and test how correct or incorrect the results are against the simple criterion of success or failure. We do this because no other criterion can be unequivocally determined and defined by reference to facts completely outside our control. We cannot so well define such ideas as "partial failure" or "had failure" and grade cases into more than two classes until much more data have been examined. Any other classification would involve our own interpretation and we might be in danger of feeding back into the data some bias or partial double-counting. Since we may check our results only against the dichotomy success/failure as defined, we must adapt our statistical models accordingly. We feel that it should be a rule that the criterion against which evidence is checked should not involve any judgment by those connected or concerned, however remotely, with the analysis or prognosis. The restricted model results in some loss of information in some hypothetical situations, but we shall show that the simple definite criterion gave results no different from those obtained by more complex criteria. (Chapter VI.)

DECISION THEORY

III.11 One further logical step is necessary to make clear our methods and the use to which the results of these kinds of projects may be put. This is merely to introduce the idea of decision theory more precisely than we have done (by indirect inference) so far. The requirement to make a prognosis (by indirect inference) may be seen as the requirement to *make a decision*[3] about each and every case—to decide whether the case is a likely failure or a likely success. Like the statistical model it would be possible for individual case methods similarly to adopt the decision approach. This is, in fact, quite often the "real life" model. When an employer is interviewing applicants he can decide only whether or not to engage each applicant. After studying

each case he may feel that he is not at all sure, but he will have to make some assessment of how certain or uncertain he is and make the dichotomous decision accordingly. This is exactly similar to our model of statistical decisions. We predict success where there is any reason to think success more likely than failure, however slight. Suppose that both statistical decisions and intuitive decisions were taken on this basis and subsequently a number of cases were found to be wrongly classified. We might challenge the intuitive assessor who might reply, "I was not too sure about this case, everything seemed to depend on how he fared in his first job on licence." The statistical counterpart of this reply would be in terms of the expectation of success. Since the intuitive assessor could not predict the type of job likely to be taken by the lad on discharge, his explanation was redundant; it invoked a further frame of reference which was not included in the design. The statistical model could be extended to the wider frame of reference also.

III.22   It will be shown in this report that by using statistical methods it is possible to classify youths into the two classes *before they enter a* Borstal far more accurately than is possible by other known means. It is also shown that it is possible to classify lads into more than two risk groups ; those with a very good chance of success being termed Category A and with less chance of success Category B, whilst those with a high chance of failing are termed D and those with less chance of failure Category C. In group A there was 1 failure in every 8 cases and in Category D only 1 success in every 8, whilst for the other groups the chance of success was 2 out of 3 (B) and of failure 2 out of 3 (C).

THE PURPOSES AND USES OF THIS RESEARCH

III.23   These concise statements of purpose need linking with the conceptual models. In order to illustrate this we have noted a number of questions raised by students at a Criminology Seminar of the London School of Economics, where the use of statistical experience tables was discussed.* Upon these questions, which may arise in other minds also, we base some further exposition.

PART II

PURPOSES AND USES

CHANCE AND CHOICE

III.24   *Does this system of statistical prediction tell me what the chances of Joe Blank (who has been convicted and sent to Borstal) becoming a recidivist?*

Not exactly in that form.   There are three stages in the prediction, not just a simple two as implied in our question.   An explanation of this must be detailed, but is perhaps too important.   Prediction of success or failure has much in common with the idea of "expectation of life". Every individual as a single individual has an *unknown* expectation of life, but insurance companies are prepared to insure an individual life without this unobtainable and unnecessary information.   The expectation of life applies to aggregates or classification groups of individuals and not to single members of the classified group.   The average for the group is "the expectation" but this tells us nothing about the way different members of the group will vary about this

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* The authors wish to express their appreciation of the valuable contribution of those several persons who took part in the discussion mentioned.

average. Similarly, before we may predict chances of recidivism we must group individuals into convenient aggregates. This does not, of course, preclude one also seeing them as individuals, but, in fact, we may learn things *about each individual* in a group by noting the characteristics of this group which *we could not learn by studying him individually*.

III.25 If we take all Borstal boys together as one aggregate (an inefficient as well as possibly inhuman procedure) we could, from the statistics given in the Prison Commissioners' Reports,[4] for example estimate that about 1 in every 3 was going to be reconvicted, i.e. to have at least one reconviction. (See above, III.17.) We might, therefore, loosely say that a boy committed to Borstal has no chance in three or being reconvicted. But whilst this may be true of Borstal boys in general, it may not be true of Joe Blank. If we knew sufficient about him we might be able to assess his personal chance of success at, say, 90%. But there are many random factors (or factors which appear random because of their complex structure) at work. We could only assess his personal chances if the whole of the experience he would face in Borstal, on licence and in life afterwards, were completely known to us. There is thus no meaning in individual likelihoods of success, since these can only be specified for given future situations which are essentially unpredictable. Life is made up of chance meetings with people, chance influences and accidents of all kinds. If, however, we are prepared to aggregate events, we observe a stability unobservable in single cases or very small groups. In fact, in the statistical sense, the more independent and random the individual variations about the aggregate means, the easier it is to predict aggregates and the prediction of aggregates becomes very simple indeed if the individuals to be included in the analysis are individually independent and completely unpredictable.

III.26 Our thesis is, then, that even if individual prediction were possible by either statistical or idiographic techniques, it would be useless for administrative purposes in a free country. Such individual prediction involves either omniscience of the future chance happenings in the lad's life, which is quite out of the question, or it involves complete control over his life, which is, if not impossible, at least politically undesirable. We must, therefore, work on a probability basis and expect a fair degree of "error" due to variations in experiences during training and after release which cannot be either predicted or controlled. These "errors" will occur even if no other weaknesses exist in the prediction system. The statistical approach takes these variations into account, since we base our predictions on the observed events which include these variations. Thus, again, what at first sight may appear to be a weakness of this approach becomes an advantage.

III.27 Let us take a concrete example of the way in which the above theory has been worked out in this study. If, say, an employer engaged a lad whom he knew had been to Borstal and had *no other* information known to be related to success or failure about him (no matter how much other information he might have) he would be justified in assuming that this lad had about even chances of being reconvicted. This assumption might be quite wrong—given more relevant information about the particular youth—but in the circumstances and with the *data available* the employer would be making a *rational decision* if he acted as though the risk of reconviction derived from his knowledge of the aggregate applied to the individual. We are thus concerned with rational decisions and not with individual likelihoods of success or

failure. We require only that such decisions shall be the "best" rational decisions. Thus, although statistical methods in one sense do not allow us to state the probability of any named individual's chance of success, they enable us to make rational decisions about individuals. That is to say, if we behave and make decisions *as though* the probability attached to the individual, our decisions will be rational decisions although, in fact, the probability does not attach to the individual.

III.28 The steps towards the "best" solutions along the lines indicated may be illustrated as follows. The first step is simple and will generally be conceded with no difficulties of ethics or philosophy. If we are able to break down our aggregate of Borstal boys into, say, two groups, and one group shows a higher success rate than the other, we may say that the failure rate for group A (whatever A might be) is less than the failure rate for B group. Or we may say, after observation, that the failure rate for those Borstal boys with characteristic X is less than for those not having characteristic X. By this statement we are implying that the population or sample of Borstal boys has been divided into two groups or aggregates—those having and those not having characteristic X. We may utilise this information in calculating *decision risks*, but not (in the strict sense) individual chances of success. There may or may not be any causal connection between characteristic X and recidivism, but this does not matter. We may still make valid statements about groups having or not having characteristic X, and we may still use this as a basis for rational decisions concerning such individuals.

III.29 But rational decisions based on one factor at a time are not highly efficient unless the one factor gives as much significant information as several. This is one example of a point of difference we have with the Gluecks' original work.[1] They showed that by considering a classification of work habits they derived a prediction efficiency to the value of 0·42, but when 6 factors (including this one) were used together by their system of combining indicators, the efficiency was not significantly greater (0·45).[6] The gain of 0·03 did not enable a more rational decision to be based on 6 factors than could have been made from one. We thus see that each factor included in an efficient prediction equation must add something significant to the value of our decision, and also that as we proceed from the general overall aggregate (about which we can make only statements of slight value) to smaller aggregations, and the more we can isolate and efficiently combine the indicative factors, the better will be our information concerning those aggregates and the more valuable our decisions regarding individuals. There is, of course, no point in adding factors unless they contribute information; by doing so we are not increasing efficiency but only the amount of ineffectual work we have to do. The technique of combining the information derived from several factors without adding also those parts of the factors which contribute no information (the problem of overlapping) is essentially a statistical technique which we will attempt to describe later, but we must first return to the problem of cause and correlation.

CAUSES AND CORRELATES

III.30 *Are the factors referred to and tabulated in this study causes of recidivism?*

There is no way of knowing whether the word "cause" may or may not be reasonably applied to any of our factors. We shall make no claim to unravel

causes of recidivism and we would not claim that even those factors which we find to be most highly associated with failure are in any part a cause of such failure. If we show that truancy is associated with recidivism the remedy would not be likely to be found in making truancy impossible. Truancy and recidivism may reflect a common element of some other factor or factors which so far we may have been unable to isolate, describe or measure. We shall show that the group with fewer job changes is likely to have more successes amongst it than the group with many job changes, but job changing is not likely to be a cause. The "instability" which shows itself in job changing may also show itself in delinquency and recidivism, but we cannot describe the cause of this instability. We may use, however, the factor of job changing as an indicator of likely recidivism, not because it is necessarily associated with the same "cause" as is recidivism, but in its own right as a piece of information leading to rational decisions. The more nearly each factor is associated with "cause", the less likely is it that the weight attaching to that factor may vary with time. The search for "causes" and the search for information on which to base rational decisions may go on together and more often than not by identical techniques.

III.51 *How does this project help in furthering an understanding of the causes of recidivism?*

The progress that the authors hope to see is along the lines they have jointly adopted in this study. In the past researches have thrown up many hypotheses regarding factors which might be associated with recidivism. These factors have often been referred to as "causes", but this claim has been ignored by us and we have not examined quantitatively more such hypotheses which could be tested with the material we had available. We thus utilised as much of previous research as it was possible to do. This stage, completed in this project albeit with some deficiencies which we shall indicate, represents the combining of the greatest possible amount of previous research into bases for rational decisions seeming to conform to the philosophy of probability which we have very broadly indicated. At the end of this procedure we could allocate Borstal boys to groups of varying probability of failure. But we know that decisions based on this probability concept would have been wrong in a number of cases, and although this number represents far fewer than that which would have occurred if judgments had been based on less information or on information differently weighted, these "errors" afford a challenge. This challenge cannot be taken up by statistics at this stage, except that it may be argued that if more information had been available more precision might have been secured. This argument is true but represents what may well be an inefficient method of improving prediction where the statistician *as such* does not know what data he needs. The idiographic method in the hands of the experienced criminologist may afford the best method for the next advance. The statistician can say, "Here are 50 or 100 cases which, according to the statistical optimum weighting of factors previously suggested as being associated with recidivism, I predicted would be failures, but these 10 or these 20 were, in fact, successes." More correctly he should say, "Here are 50 or 100 cases where rational decisions based on consolidated previous research would presume failure, but these 10 or these 20 cases were, so far as we know, successes." He might then ask the criminologist why this was so. What were the likely factors which were NOT accounted for in the equation

which resulted in or were indicative of the difference between the statistical estimate and the facts? If this question can be answered progress has been made in that further testable hypotheses have been found. The statistician may then come into the picture again, ascertain the confidence to be attached to the hypothesis, include the new factors with optimum weights, and discard any degree of overlap with factors already included. The procedure thus starts its second round of identification (idiographic approach), description, measurement and analysis. Nice as this scheme may seem in outline, there are further theoretical difficulties if it is carried far. The number of cases incorrectly classified by an efficient prediction will be small. If only one case exists, for example, and the criminologist is certain that he can identify what the factor was, the statistician cannot test this since there is no room for any variation (degrees of freedom). Similarly no degrees of freedom are left if there are as many cases as factors suggested. In this report we give a number of case histories which are intended to put some flesh on the dry bones of statistical categories.

BEST DECISIONS

III.32   *Does our success or failure very much depend on how the ex-Borstal boy is dealt with whilst on licence?*

Doubtless both experiences in Borstal and during after-care have a very large effect upon the youths. It is to be hoped that later researches will examine this problem. Let us first consider after-care. At the present moment in this study, variations in behaviour which are due solely to variability in after-care are included with the "error" of the prediction. It may be that, amongst those cases whose prognosis was bad, some may have experienced after-care so far better than the *average for this group* that it accounted for their success against the odds. If after-care is such that each lad gets the best after-care for him *as an individual*, then this fact makes no difference to our prediction. The prediction is only affected if some lads get *more suitable* (or better) or less suitable after-care than others.

III.33   At any time when we are required to make a prediction, certain information will be available which may be used. The sort of information and the value of this information will be dependent upon the time at which the prediction is required. If we are required to predict after a year's experience in Borstal we may use amongst other factors those items regarding conduct and experiences in Borstal which would not be available if we were required to predict before committal. This is, of course, self-evident. Thus the shorter the time between the prediction and the event to be predicted the more information likely to be of value will be available and the better the prediction is likely to be. If we were to take into account the factors which only became known, say, during the first few weeks of licence, we might be better able to predict success or failure during licence. In this study two predictions have been completed, the first using only factors available at conviction, and the second, factors available at discharge on licence. We also make some attempt to show the effects of different experiences in Borstal training.

III.34   *How can an assessment be made of the effect of after-care?*

The emphasis in any prediction study may be in one of two directions, (a) we may seek to predict *action under a given set of circumstances* or, (b) we may seek to predict the *set of circumstances* which are most likely to bring about

some stated activity.[7] In this study the emphasis has been on the former aspect of prediction whilst the effect of after-care is a problem more nearly of the second type. We have sought to predict "*action* (*i.e. further crime*) *under a given set of circumstances*". The "*given set of circumstances*" in this connection is the average or normal circumstances of Borstal boys on release and up to one year after expiry of licence. We know nothing about the circumstances particular to one individual which will occur in the future (taking future to mean any time after the prediction is made). He may go insane, die, meet a good friend or get mixed up with a bad gang, or a thousand and one other possibilities await him after our prognosis is made—whether in Borstal or on release. We do not know, nor have we attempted to find out, how much crime or recidivism is due to factors "inside" the individual, and how much is due to circumstances. We need not know this if we are prepared to make our predictions general, and since general predictions are required for rational decisions we make no assumptions at all about his future except as is implied in our theory, which we may restate briefly with this special point in mind. As these youths were members of the aggregate of convicted Borstal boys at the time of origin, they were also members of the aggregate of released Borstal boys at the time of discharge. They remain members of the sub-groups or not as the facts show for such sub-groups as we are able to construct, and have certain measurable qualities. The prognosis is built up on these sub-groups and qualities.

III.35   The system of prognosis affords a system for testing the value of different forms of treatment and after-care but does not *itself* tell us anything about the value of either in general nor about different aspects of the work.

III.36   *Prediction methods cannot tell us which is the best treatment for a young offender?*

Only to a limited extent can we gain information about the value of different forms of treatment from this single study, but prediction methods are a useful way of testing the effects of different treatment and will be of value when an integrated plan of research along these lines can be worked out and implemented. We shall then be able to show whether "rational decisions" regarding treatment have a better result than "intuitive" decisions. There is much research to be done before this stage can be reached and *ad hoc* projects cannot meet the requirements fully. The method which might be used in research of this kind is illustrated in this study by a consideration of the treatment of Borstal boys in open and closed institutions. The main problem in comparing the results of different treatments is in the different kinds of material upon which the different treatments have to work. We shall show, for example, that the success rate for open Borstals is higher than for closed partly because the open institutions are given better material upon which to work. By use of the "prediction equation", however, we can make estimates of how much of the difference in the results of the two types of institution is due to the form of treatment and how much is due to the better risks sent to open Borstals.

III.37   *Is not this system of prediction a terribly impersonal business—you turn up some tables, add up some numbers and you base decisions on this?*

On the contrary. Before a lad can be allotted to a risk category certain information (*proved and tested to be relevant*) has to be ascertained. This

information distils into small compass the effective results of years of research. So far as the information used in the "equations" is concerned, there is no better way of taking this information into account than by weighting it according to the equation. So far as information which was tested by the equations and found to be of no value as an indicator is concerned, there is no point, or may be positive harm, in taking this into account. The only information which may be obtained by intensive interviewing and the "personal touch" which *might* prove useful is that which was not examined in this study because it was not available in a sufficient number of cases.

III.38 *But some cases will be classified as failures who will, in fact, become successes and some successes will be classified as failures. Is this just?*

The justice of the statistical approach is not arguable—justice is not a function of statistics. Statistics only ensure that rational decisions may be taken with known risks. Nothing is perfect in this world and we must take our choice of taking risks and more often than not coming to the right decision, or of not making any decisions. But decisions will *have* to be made and we may make these decisions on the optimum weightings given by statistics or intuitively on other weightings, which, given only the same information as bases, must be less efficient. Without statistical aids even more will generally be incorrectly classified. It has, in fact, been demonstrated in this study that the statistical classification into likely failure and likely success groups results in more than twice the accuracy of intuitive methods based on judgments of highly experienced assessors. This means that if the assessor has access to the statistical tools and uses his judgment to supplement these (where and in such ways as such supplementation is valid) the two methods together are likely to result in better classification than any one alone. If the assessor interviews a large group of boys in Category A (7 to 1 chance of success) and estimates by his judgments of other factors (in themselves valid) that only 20% of his group will be successful, he will be wrong—if he can say that in this group the statistical tests tell him that there are about, say, 8 failures and he believes these failures are 5 particular cases and not any of the others because of *factors which were not included in the equations as examined in their construction*, he may be making a valuable addition to the information available.

III.39 *Can the statistical tests tell us anything about the relative likelihood of success within the risk group?*

Yes. Each individual obtains a score by the prediction system and we can place the individuals in the experimental sample in rank order. So that given a group of cases in, say, group A, the lad with the lowest score (points counting against success) is the one to whom a rational decision would involve giving the greatest chance of success. Groups have been used in presenting these data to emphasise the nature of the logical basis for allocating probabilities to individuals for purposes of decisions regarding them.

COMPARATIVE NOTES

III.40 *Can success be predicted more certainly than failure or failure more certainly than success?*

We have arbitrarily separated our groups of risk so that the group we shall call "A" (having the best chance of success) has as large a proportion of

successes amongst it as our group "D" has of failures. So we may say that the chance of success for group A equals the chance of failure for group D. The ratio of failures to successes in group A is 1:7 (using only factors known before committal) whilst the ratio of successes to failures in group D is also 1:7, using the same factors. In "500 Criminal Careers"[10] the Glueck's' best score group (Table 112) had a ratio of successes to failures 5:15 or 1:3, whilst for failures the ratio for the worst group was 1:117. The ratios are not comparable with our study, since in this research the proportion of failures was about half, whilst in the Glueck's' study it was 80%. To compare the results of our group A and group D with the top and bottom score groups of the Glueck's, we need to consider the improvement on chance which results from these two classifications. For the Glueck's' best score group, 75% were successes with a chance likelihood of 20% (1.8:5) whilst for the worst score group a similar ratio of 1:3.75 was obtained. In our group A 14% were failures against a chance likelihood of about 50%, giving a ratio of 1:3.6, with a similar ratio for group D. Thus the precision of the two classifications for these groups is almost identical. But the number of lads in our group A is greater than in our group D. Unfortunately, the Glueck's in "500 Criminal Careers" do not disclose any numbers of cases in their groups, but it is evident that their worst group was very much larger than their best group. It seems then that, judged in this way, the Glueck's found failure easier to predict than success, whilst we found success easier to predict than failure. In fact "over-prediction" of failure has been more common in prediction studies so far than has "over-prediction" of success.* But we found it more difficult to get information about our bad ones than about our good, and it may well be that in a completely balanced sample of Borstal boys the numbers in D would be about equal to the numbers in A. We cannot offer any proof of this suggestion except that inferred by the differential availability of the required data.

III.41   *In most prediction studies completed to date there have been large groups about whom no prediction could be made. Has this been found in this study?*

At first this was so, but we believe that we have found a solution to this problem. The Glueck's' experience may again afford a useful reference. We know that for the centre two groups of their classification very little could be said about likelihood of success, but they do not disclose the numbers falling into these categories. By using the percentages given and deriving estimates of the numbers, it appears that they could not establish a criterion for well over a third of their cases. Their experience, if this deduction is correct, is typical and represented a problem which we set out to solve. We first had to decide at what point we would regard our prediction as ceasing to give useful results. This point we suggested might well occur where, by using the table, we could not get 2 cases right for every 1 wrong. Although this was of greater accuracy than subjective judgments, we regarded this group (where the prediction would have been wrong in more than 1 in every 3 cases) as unpredicted by our first equation. We then sought a classification system for this "unpredictable" group. In this respect we were successful, although the results could be put forward only tentatively as illustrating a useful method rather than as conclusive evidence. In working out our prediction system, there-

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* See I.47.

fore, it was necessary first to calculate a lad's score by the first equation, and if he fell between certain groups we declared him as "unpredictable" to the original equation, and proceeded to calculate his score to a second equation. The group about whom no useful prediction could be made thus vanished. It is interesting to note that the factors which count most in the first equation are those related to the past criminal career, whilst those which count most in the second are those more related to personal qualities. The personal qualities, in general, do not seem to get a chance of showing their influence on the prediction equation when "swamped" by factors of more weight, but once these have been removed by the first tests, they help to discriminate between lads likely to succeed and those likely to fail. For reasons which will become obvious later in this book, this fascinating line of research could not be followed further in this project. It seems, however, to suggest that in future a separate consideration of "personal factors" and "past criminal experience factors" would be well repaid. An investigation of whether these two groups of factors represent two dimensions of criminal classification seems to be called for.

III.42 *How would you assess the main value and limitations of your present work?*

The major results of this study must not be considered to lie in the *direct* application of the experience tables which it provides to the classification of Borstal trainees, and the concomitant administrative action. The study has demonstrated that prediction along the lines explored is possible, but the tables which have been built up often rely heavily on data which might be inadequate. There remains an element of doubt which is mainly due to the fact that the information used for research was not originally collected for research purposes. Data which are to be used for prediction purposes (or other scientific research) differ in many respects from those which are adequate for administrative purposes. Because of this fact we would rather claim that the major results of this study are in its demonstration of workable methods and in the by-products of the prediction technique. We can show, for example, to what extent the higher success rate of Borstals of the "Open" category may be due to the better type of lads upon which these institutions work and to what extent this may be due to the form of treatment. We can show also to what extent the incidence of detention in a Borstal institution was associated with the likelihood of success of the convicted youth, holding out of our estimation the fact that those who appeared to be poor material were likely to be retained longer. We would rather draw attention to the use of prediction techniques as a tool for research than to suggest that they form a basis, at this stage, for administrative action. In using our prediction tables as a means of classification for research purposes we were able to avoid the element of doubt which exists due to the paucity of some of our data. If the experience tables were used for administration, this fact might itself affect the future collection of data, so that our tables, based on data without prediction in mind, may cease to be representative of the future sets of data collected for a different purpose. Why this is so will become clear as we report in much detail the methods used and the results obtained.

4

SUMMARY OF CHAPTER III

After a period of Borstal training some youths committed further crimes ("failures") and some did not ("successes"). Certain data which describe the personality and experiences of these two classes of youths appeared in their Borstal files and other official papers. The main purpose of this research was to find systems of utilising these data, so that the two classes might be discriminated with best advantage

    (a) before the committal to Borstal

    (b) on release on licence.

Statistical methods were used as an integral part of the research design and, although apparently different, the basic ideas underlying these methods are seen to be closely analogous with methods of intuitive or normal prognosis from case histories. The philosophy of the statistical approach invoked no prior hypotheses but merely set the task of using the available data to its maximum efficiency of discrimination.

No causal relationships were suggested by the analysis. The final results of the study are of value in specific problems without any need to invoke the idea of the cause. The problem was resolved into one of deciding the best course of action to achieve a given end result most frequently.

The statistical tables which the analytical procedures of this study provided are tables of experience related to success or failure. They are not, in themselves, prediction tables, although they may be used for prediction purposes. The tables show how different past crimes and past social and other factors might best be combined to indicate the successes and failures of the sample studied. It may be assumed that what has been effective in discriminating successes from failures in the past will continue to discriminate in the future. This idea underlies both the statistical approach and the use made of nonstatistical experience by other methods of prognosis.

Two different statistical ideas were involved. The one used the experience tables (statistical data) to suggest only whether a case was likely to be a success or more likely to be a failure and classified the sample into two groups: those for whom success was to be expected on the basis of the experience and those where failure would similarly have seemed more likely. The second statistical idea involved the more efficient but rather more complex presentation of the probability of success or failure. By this, cases may be graded or divided into a number of groups. In the first model there was a simple linkage between the statistical discriminant (success/failure classification) and the criterion (success/failure as observed). The two-group classification may be tested directly against the two groups by which the cases were described. Failure or degree of success or failure was not measurable and, we felt, could not be defined with any real hope of agreement. The two-group classification is the model with which we carry out most of our exposition. Later (Chapter VI) we shall examine other systems.

REFERENCES TO CHAPTER III

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(5) Annual Reports of the Commissioners of Prisons (London, H.M.S.O.).

(6) As (1) pp. 246 and 285.

(7) D. L. Lamberth and L. T. Wilkins, "Design and Analysis in Prediction Surveys". Paper read to the 1951 International Conference of the World Association for Attitude Research. (Social Survey Methodological papers available on request to Social Survey, London.)

CHAPTER IV

A Description of the Basic Procedures

IV.1   As we have stated in Chapter II, about 2000 youths were received into Borstal Institutions in this country during the year covered by our study. There were 12 Borstal Institutions in different parts of the country. Each Borstal Institution had special characteristics—some being open camps and some having considerable security arrangements. The particular Borstal to which a youth was sent did not depend upon the Criminal Courts who passed sentence, but on the observations made of his behaviour and from a study of his record and background carried out at a Reception Centre. The youths remained at the Reception Centre for a period of about 3 months.

SAMPLING PROCEDURE

IV.2   It was certain that we could make a valid estimate of success or failure only if the cases we were to study in this project were fully representative of the whole of the Borstal population. We could not merely take a set of records which were readily available. It seemed likely that there might be some association between the availability of records and the characteristics of the youth to whom the records applied. This suspicion proved to be fully justified.   We, therefore, had to find a complete list of all Borstal boys and to use this list as a sampling frame.

IV.3   Within the permitted sum allocated for this research project, it was calculated that about 700 cases could be studied.   We had, therefore, to decide whether to take a complete intake for a third of a year, or to take 1 in every 3 cases throughout a year.   It seemed likely that there might be a seasonal trend in types of crime if not in any other factor with which we should be concerned, and the latter course was adopted.

IV.4   As we have noted, every youth who was sentenced to Borstal training proceeded first to a Reception Centre.   There were two such centres, one at Wormwood Scrubs and the other at Latchmere House.   Every entrant to these centres was listed in the register of admissions.   The register of admissions at these two centres, therefore, provided a complete sampling frame for all Borstal boys for any period which we might decide to investigate.   The register was, in fact, for our purposes slightly more than complete, since it contained those who, whilst awaiting allocation, were found to be mentally incapacitated or whose sentence was quashed.   The inclusion of this additional small proportion of cases in the basic sample was considered to be safer than any attempt to identify such cases at the initial stages of sampling. Sampling should be a rigorous procedure into which no subjective judgment may obtrude.   After the complete sample had been drawn, we had 748 cases, of which a total of 25 cases were rejected before further analysis when a study of their records showed that they were not properly included.   The exclusions from the complete sample were: 10 found mentally defective, 7 died before completion of Borstal training, 8 sentence quashed and a sent to prison, 1 absconded with no further trace.   In all except 3 of the residual 723 cases

we were able to find out whether the youth had proved to be a success or a
failure.

IV.5   We had to consider the most suitable period to be covered by the year's
sample. It had to be neither so recent as to allow for no adequate time for
testing after discharge nor so remote as to be directly affected by the Second
World War. The fact that Latchmere House, with its improved facilities for
observation, was not in existence before April 1946 had also to be taken into
account. With these considerations in mind and as already briefly indicated,
it appeared likely that the sample would have to be drawn from lads who
entered the Reception Centres at some time during the years 1946 and 1947.
Before the exact period was decided, a sample of 120 records was examined.
This sample consisted of four groups of 30 records each of youths who had
passed through Wormwood Scrubs Reception Centre (a) in the second half
of 1946, (b) in the first half of 1947, and similarly for Latchmere House.
There was no significant difference between the records of the two periods of
time to warrant the exclusion of the latter part of 1946 cases, nor was there
sufficient difference between the information available at the two centres.

It was decided to select cases admitted within the period 1st August, 1946,
to 31st July, 1947, from each of the two centres.

IV.6   We were, therefore, able to get a completely representative sample of
all the youths who entered a Borstal Institution during the period of the
study. Unfortunately the information available from the reception records
was very limited. Any data other than the name and number and details of
the Court and date of committal and the nature of the crime for which com-
mitted had to be obtained from records not available at the Reception Centres.
Clearly the most important piece of information we required was whether the
youth could be classified as a "success" (having no further record of crime)
or a "failure" (having been apprehended again after his Borstal training, or
having had his licence revoked). In this respect we were able to complete
our sample except for 8 cases. It is possible that the 8 cases whose names
were drawn in the basic sampling procedure were not traced because of typing
errors or other transcription errors in copying from the register of admissions
to other papers. A loss of 8 cases in 720 cannot cause a bias affecting our
findings.

IV.7   Our data, however, were not by any means complete in other than this
one respect. Although this was a serious disadvantage it should not mislead
us, since the essential classification into "success" and "failure" groups was
ascertained for 99½% of the sample. It may, however, mean that we may
lose in efficiency of analysis. We were, however, protected from any direct
or indirect erroneous assumptions regarding the outcome of cases where the
criterion might otherwise have remained unknown—a weakness of some
previous researches in the criminological field.

THE RECORDS

IV.8   Each of the youths on arrival at the Reception Centres brought with
him a trail of evidence beginning quite often in early childhood. The majority
of this evidence was found to be summarised in the Borstal file.* These files
served as the main source of our data in this project and we shall consider
their form and design in some detail. The Borstal files were designed to

* See Appendix IV for outline of such files.

provide the administration of Borstals with the information required to decide upon the treatment of each youth. They were also used to report progress whilst the lad was undergoing training. The files follow the youth should he be transferred to prison, his licence revoked, or he again convicted and given a further term of Borstal training, or given a prison sentence.

IV.9   It was to be expected, therefore, that the files which had been passed around from one Institution to another would be more difficult to trace, and that these files would belong to the worst cases—the more likely failures. This expectation proved to be true. It was all too obvious, after completion of the study, how much bias would have resulted if we had taken into our sample only those cases where information was available, and had not obtained an independent sampling frame in the Reception Centre records of admissions. We find it necessary to return to this point again, but we shall first note briefly the other records concerning Borstal youths which were studied and which served as sources for our information.

IV.10   When the individual was released on licence from his Borstal Institution, copies of certain information in his Borstal file were transcribed into a document which formed the basis for the work of the Central After-Care Association. This document was used to report progress whilst on licence. Any further entries were noted on this record when advice was received from Criminal Record Office that the youth had again been apprehended, charged and committed.

IV.11   Since it is known that a large proportion of crime is committed by persons who have committed crime before, the main function of Criminal Record Office is to maintain up-to-date information regarding the characteristics of offenders and offences, noting, for example, when offenders are released or escape, since they are then able to commit further offences. As may be expected, the Criminal Record Office at Scotland Yard possesses a first-class record system geared to its special purposes.

IV.12   The three sources of data which we have named were used in this study in different ways. The data we sought to use were originally obtained for administrative purposes, none were collected for the specific purpose of this or other research in the first instance. The fact that we were using data originally designed for administration meant that we were faced with several problems of interpretation but it had the great advantage that the conclusions at which we arrived could be repeated by any other person with access to the same records. No special skills of data collection were utilised, and accordingly the results of the experimental situation have nothing about them which makes them invalid in non-experimental situations. The most convenient source for most of the data which we considered it advisable to seek was clearly the Borstal files, since here, in one cover, we had a summary of the lad's career until the time he left his Borstal Institution. For the follow-up information, the Borstal Division files were the obvious choice.

IV.13   If all had gone well, the project would have concerned only these two sets of records. Unfortunately, a fair proportion of the files could not be traced within the time available for the study, and it was also noted that the files which it was most difficult to trace belonged to youths who had, on average, a worse record. This was not surprising, since youths who had relapsed into crime had most often been sent to prison, and the Prison Governors were anxious to see their Borstal record. Youths who had been sent from one prison to another, and whose Borstal Files were following them

represented the worst class of risk, and their files became more and more difficult to trace. It was extremely important that at least some information should be available about each case in the original sample, and that for every case we should know whether or not he had remained crime free until the date of closure of the project. It was in this last stage that we were very fortunate in obtaining the help of the Criminal Record Office. The net result, as we have noted, was that only 3 cases were lost in respect of this vital piece of information.

IV.14 We will now return to a consideration of the three individual sources of our data and note the problems involved and the methods of abstraction, coding and analysis used.

IV.15 The Borstal files which served as the basis for this research were not always complete. From time to time changes had been made, and since the completion of this project the pattern of the files has been standardised. The present file records the places of detention, medical history, particulars of convictions, discharge reports, instructors' reports, Borstal history, record of letters sent and received, visitors' and miscellaneous reports and various inquiry forms which are issued at the time the Courts are considering a possible sentence to a Borstal Institution, for example, home and school reports. A specimen set of headings from the current records are given as Appendix IV. The best files used in the current study were similarly made up, but in a number of cases sets of items were not being recorded by certain of the Institutions.

IV.16 The problems in the handling of the Borstal files for the purposes of this research were of four kinds:

<blockquote>
(a) Accessibility.
(b) Comparability or objectivity.
(c) Completeness.
(d) Adequacy.
</blockquote>

IV.17 In respect of each of these categories of problem arising from the basic data, some modification of the original straightforward scheme of research was found to be necessary. Since we needed to add together our pieces of information, we could only add like to like. We required, therefore, a standard basis of definitions in order to achieve comparability of the data between different reporters and assessors. This standard definition could in some cases be superimposed, but in other cases it was necessary to omit information when comparability was too much in doubt.

IV.18 It is necessary, therefore, to say something about each of the four types of problems arising from the nature of the data, so that an adequate appreciation may be made of the possible limitations of this project which cannot be statistically assessed.

ACCESSIBILITY OF THE FILES

IV.19 We have remarked that the Home Office experienced more difficulty in tracing the files belonging to cases who had been sent to several prisons in the intervening years. In fact, we found that there was a direct correlation between the time it took the Home Office staffs to trace the Borstal files and the proportion of successes in any batch. In total the success rate was 45%, but in the first 300 files received the success rate was nearly 70%. In the end we were 56 files short of the complete sample, and a search by Criminal

Record Office revealed that of these 56 cases were failures—a rate of 82%. We cannot, therefore, regard the sample for which cases were available from Borstal files as strictly representative of the Borstal intake in the year surveyed. This was a factor underlying and modifying a large proportion of our analyses. It was practicable to make statistical adjustments for this group in some cases, but where important facts are involved we have made such tests as we could and have given some indication of the degrees of reliability of the information if it should be extended to the general case.

IV.20 Different Institutions were designed to meet the needs of different classes of youth, and, as we have explained, considerable care was given to ensure that each individual was allocated to the Institution most suited to his needs. It is not surprising, therefore, that different classes of Institution had different success rates. As we shall see in more detail later, the best 3 Institutions had 128 successes out of a total intake of 194 (a success rate of 64%) whilst the worst 3 had only 50 successes out of a total intake of 187 (a success rate of only 30%). Unfortunately, it seems that the Institutions which were the better record-keepers also tended to have better success rates. The fact that some items of information were badly incomplete meant that we had often to exclude even cases where it was available in order to reduce the risk of bias. If we wished to know how, say, 4 factors, a, b, c and d, went together we could examine this by considering only cases where all 4 factors were known—we could not use cases where a, b and d, were known and where b, c, and d were known, since the intersection of, say, a and b would be incomplete and possibly biased towards the better record-keepers, and hence towards the Institutions with the higher success rates. This was a different policy from that followed by most criminological research workers in the past. It was their policy to use all the data available for each factor where it was available, but not to require the data to be complete within the configuration of factors utilised. This difference is regarded as being more than a mere technical quibble about a point of detail.

COMPARABILITY AND OBJECTIVITY

IV.21 The differences between Borstal Institutions did not affect any of the data which we obtained from the Borstal records relating to prior to entry into the Institution. The differences between the Institutions themselves were used as a factor in the study, and, given that the data were complete, no problems of comparability resulted from these differences. Information relating to observable facts (medical record and the like) should similarly cause no great difficulty. But it was when we had to make use of data which were derived from subjective assessments made at different Institutions by the staff of these Institutions that we became concerned. In most of these cases we could avoid the issue by assuming that differences which were not identifiable were "error terms" and regarding them as such in any analysis. When we consider an item of data independently of its source, we may regard variations about the overall mean for all sources by that one source as adding to the error of our single observations.[1] We have, therefore, to give most weight to objective facts which could not be modified by methods of reporting.

IV.22 Since so much of criminological research to date has made up so much use and relied so much upon subjective judgment, it might seem that this was a very high price to pay for comparability and reproducibility. In

the last analysis it seems that we can show this not to be true. It may not always have been realised in the past that most subjective judgments are based on observations of facts. We considered that it would be preferable to go *direct* to *what* facts we could obtain. The subjective judgment has been useful to past researchers because it has enabled them to put together into one measure, one judgment, a complex of facts—the background facts of the subjective judgment. Statistical techniques, however, have now been developed which enable the configuration of facts to sort out its own classification according to rigorous and known rules. What then at first sight may seem a loss, may in the end prove a gain, if we were able to identify and obtain information on the basic facts which would normally be the basis of judgment. The statistics will put together these facts in the same way in each case and with a known system of maximising the efficiency of such pooling. We should lose only if the facts we put into our analysis were not a sufficient number of the facts upon which subjective judgments are usually based. Thus, for example, the Gluecks[2] used the concept of "industrial success" and "work habits", which we have reduced to the number of jobs in a unit of time, and the average duration of such jobs. We leave the overlap between these two objective measures to be taken care of by the statistics, since we are then sure that no double counting will arise. If these two objective measures account for a sufficiency of the items involved in an assessment of "industrial success" or "work habits" on a subjective basis, our results will not differ significantly from those we would have achieved if we had used the subjective assessment. By thus avoiding (wherever possible) data which were impressions of different people with different backgrounds at different types of Borstal Institutions at different times, and by using the basic facts without modification, we were able to avoid most of the problems of lack of comparability between the large number of judgments which we should otherwise have had difficulty in reconciling.

IV.28 One or two items which did not have a factual basis had to be used. It would, for example, have been pointless to exclude, because of this principle, the Governor's and Housemaster's reports on each youth. These reports were made immediately before discharge to freedom. The Governors and Housemasters were given completely free scope in reporting: the report form was, in fact, a blank sheet of paper giving no restrictions as to the content nor guidance or directions.

IV.29 No particular factor could be extracted from these reports because of their general character. We were much concerned to find the best method of interpreting these subjective data since the Governors and Housemasters were, we considered, the best placed to make such judgments. A special study of these data is reported as Appendix V. We were finally led to the conclusion that the reports were not of much value for prognosis and subsequently we considered that this might be expected from some of our later findings. In Chapter VI we show how the prognosis of optimists and pessimists might differ from each other and from the eventual facts. If Governors and Housemasters were good therapists it seems that they must be also optimistic about their charges, and hence we should expect that any prognosis would not be the best—unless they could separate their rôle requiring optimism from those requiring a detached objectivity. In the use of the data no allowances could be made for the different view-points of the different Governors and Housemasters. We should not identify any one individual

Governor or Housemaster who had developed the art of intuitive prognosis more highly than his colleagues.

IV.25 The difficulty of interpreting free-style systems of reporting was overcome by using two systems of interpretation, one outstandingly "better" than the other.* The question of interpretation might be suggested by cross-tabulation of the two systems. If the "better" system of interpretation showed a higher degree of agreement between the prognosis and the facts, we might assume that the value of the reports depended on their interpretation. Using the coefficient of contingency (rⱄ) to indicate the agreement between the prognosis of the reports and the outcome, we found the following:

ASSOCIATION WITH CRITERION

	"Better" system of interpretation	Cursory assessment of content
Governors' reports	0·20	0·25
Housemasters' reports	0·13	0·22

IV.26 The "better" system of interpretation involved the expenditure of six times the money and effort of the cursory assessment of the content of the reports. There is no evidence that this was justified. Indeed, the simple direct method of assessment yielded a better agreement with the end result (a gain of 0·05 in one case and 0·09 in the other).

IV.27 The reasons why the subjective prognosis did not correlate more highly with the observed facts may fairly be claimed to arise from factors outside the control of the authors of this research, and may well lie in the nature of the subjective judgment itself. Various claims have been and doubtless will continue to be made for the value of intuition and its related subjective assessments. These findings have little of relevance to these claims whether past or future. Subjective assessments, whether good or poor, are of very limited value because of the difficulty (or impossibility in some cases) of others reproducing them. Our aim in this study was to produce a tool of prediction which could be used with the same effect by anyone with a knowledge of simple arithmetic and irrespective of his skill or experience in other fields. Thus main purpose of the inclusion of the subjective assessment was to provide a base line against which the prediction instrument we provide could be appraised.

COMPLETENESS OF THE DATA

IV.28 In common with nearly all criminological studies of this kind, we were faced with the problem that, for a large proportion of the cases, information which we had cause to believe might be valuable could not be found. In all except 8 cases, however, we were able to classify the lads as being either "successes" or "failures". Many follow-up studies to date have suffered the defect of it not being established in a large percentage of cases what had happened to the individual. The fact that we were able to get such complete information was due to the high efficiency of Criminal Record Office,

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* For fuller discussion see Appendix V.

Scotland Yard, whose help was invaluable. For other items of data we were less fortunate. Amongst the items of data which it was hoped to find, the following were available in such a small proportion of cases (less than 80%) that analysis was abandoned.

> Records of letters written and received whilst in Borstal.
> All data relating to early schooling.
> The number of persons in the household.
> Occupation of the head of the household.
> Number of rooms.
> Occupation of the subject.
> Length of stay at address.
> Address.
> Income of household or members of household, etc.

IV.29   Although this seems to be a fairly gloomy picture, we were able to obtain sufficient data in respect of about 60 items concerning each youth. When we required to have several factors simultaneously (for purposes of prediction) the sample size, however, was reduced to about half. We shall later discuss the way this problem was dealt with.

ADEQUACY OF THE DATA

IV.30   The best answer to the question of whether the data we were able to obtain in a sufficient number of cases were adequate for the purpose of the research is to be found in the results of the research. It can only be guessed how much better the results might have been had more data been available. IV.31   Clearly there were many items which it would have been of interest to have explored further, and some of these might have helped in the prediction problem. From a study of previous research in this field, however, the data we were able to obtain were in nearly all cases those data which other workers had found to be of the greatest value in prediction. It is very doubtful if any gain would result from the study of more items or from the study of items in more detail from records of the type which were then available. When we seek to apply statistical methods, we require not so much quantities of data as data of high reliability.

IV.32   The data which we examined were we feel adequate to sustain the claims we make, although improvements might be made in the efficiency of our results if better data and some other forms of data had been available. It is foreseen, however, that the results of this study will quite likely be extended beyond the point where the data and the methods are adequate. Nothing in this study pretends to suggest anything about the *causes* of delinquency nor about the *reasons* for the success or failure of Borstal boys. Some of the facts which are brought out in the study may act as "signposts" to "causes", but no more than that. A large number of the correlations which we have used, and are quite justified in using for the purposes for which this study was designed, may be spurious correlations, or correlations which exist only because there are other factors associated with our criteria and the factors concerned, and some of these may be the observed result of a long chain of unknown inter-associations. We shall show, for example, that youths who had been fined at any time in their criminal career before being sent to Borstal represent worse risks than those who had not been fined. It should not be assumed that fining youths is thus a form of punishment which causes them to become bad cases—either because it represents a too lenient

form of punishment, or because it prompts them to "take out of society" the money which has been "taken out of them".

IV.33 In this case the previous fining was evidence of a previous crime. Perhaps if we separated "previous crime" from previous "fine" the correlation between fining and failure might vanish. But since persons are not fined unless they had failed to comply with some law, the observation of a "fine" in the past experience of any case is automatically an indication of some law-breaking act. Any previous crime would have had a previous treatment, and the treatment and the nature of the crime are essentially confounded. A person who has committed a crime in the past is apparently more likely to commit a crime in the future, and persons who have committed some sorts of crimes are doubtless more likely to commit further crimes than those who committed other sorts. The treatment given after any crime takes into account the sort of crime. Few people would argue that it was the previous treatment rather than the previous crime which was the real "cause" of the lad repeating his criminal behaviour, nor, without detailed analysis, can it be said whether one form of treatment leads more probably to reformation than another. We hope later to show how it might be possible in future to design studies which might sufficiently distinguish between the factors involved in different forms of treatment.

IV.34 The cause, which may or may not be somewhere in the likely chain of associated events between the fining and the entry to Borstal and release from Borstal, is that not identified by the simple zero order correlation. This does not, however, prevent us observing the fact that a youth has been fined, and then, because of this, stating with confidence, that he represents a worse risk when he is committed to Borstal than a youth who has not been fined in the past.

RESEARCH OBJECTIVES AND ADMINISTRATIVE DATA

IV.35 We have briefly referred to the differences between data for administrative and research purposes. In concluding this section we feel that some more detailed comment might be of value. The types of data which are usually collected for purposes of administrative action are not normally suitable, and certainly are not as efficient for research purposes as data obtained with the purposes of the research clearly in view. In principle, however, there is no reason why the type of data which are required for research purposes should not also serve fully the purposes of administration. Statistical analyses require that data should be capable of reduction to some form of number (even if this amounts only to "yes" being called 1 and "no" being called 2) and that it should be known whether each and every item was applicable or not. The main difference between research data and data which might serve for administration is in the method of recording, and not in the basic information itself. This is particularly the case for information which is not given. For administrative purposes it might be sufficient that an item is not mentioned when it is regarded as not applicable but for analyses it is essential to know why an item is not recorded. Although data based on subjective judgment have been rejected as far as possible from the analyses given in the first part of this report, this was not because subjective data as such were regarded as of no value. There may well be occasions when a good definite subjective assessment is of more value than objective measurement. When it is possible to obtain facts or objective measures, these

should, however, always be obtained, and, unless there is evidence to the contrary, regarded as preferable to subjective assessments.* Objective measures have the feature of being reproducible by others, whilst the value of a subjective judgment depends on the skill of the person making the judgment. If then a number of persons of differing skills are making assessments, the value of the pooled data remains uncertain unless we have, in addition, an assessment or a measure of the particular skills of the judges.† The area over which there is scope for the judges to vary between themselves is itself related to the width of the field they are required to cover in any one assessment. An overall assessment of a personality, for example, is an extremely wide field, and the variation between judges may be expected to be far greater in this case than if they were asked to rate a series of traits separately. The rating of a series of separate traits is in no way a bar to an overall assessment being made as well. If this sort of approach were made, the separate ratings of several traits could be used as a measure of the skill of the judge in overall rating. It seems that for administrative purposes the narrative report has become accepted because of its ease of reading, and administrators have become accustomed to this form of presentation, rather than glancing down a column of ratings and themselves putting together a composite picture from the parts. From the point of view of research analyses, the putting together of the several parts is best done by the mathematical procedures, and if the several parts are not known with any certainty, much is lost, since the composition of the overall report is not capable of interpretation from within itself.
IV.86   Difficulties encountered in interpretation of the Borstal Files have been mentioned and will have to be mentioned again from time to time in this report, and we shall in nearly all cases report that a large number of individuals could not be placed into categories for some factors.   This was one of the direct results of undirected, unsystematic open reports, where it was left to the discretion of the assessors whether they mentioned each factor or (if they did not regard it as of importance, either in the particular case, or because they did not regard that factor as important in principle) left it out of their statement.   Some gave some details, others different details, some little or no detail.   For research purposes, the only information which could be used was that which represented the lowest common factor of all the reports studied.   Thus, lack of specific information which might not be a serious deficiency for administrative purposes where one case is being considered at any one time, becomes a very serious loss when we seek to study each case in reference with the group or sample of cases.   We cannot focus our attention on specific factors when these are mentioned in only a small fraction of cases, and in no cases are there sufficient factors mentioned to enable inter-associations to be estimated between them.
IV.87   It may be considered that undirected and unsystematic reporting assists in the description of factors which defy measurement—the intangibles which are usually believed to be very important.   Whilst it is likely that there are some unmeasurable factors, it has yet to be shown that they are uncorrelated with measurable factors.   In most fields were measurement has helped forward the scientific approach, it has been shown that the items

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* See also IV.21 and IV.22.

† This was, of course, the case with our analysis of the reports of Governors and House-masters.

which it was not possible to measure were also items upon which it was impossible to find agreement amongst those who most profoundly believed in the existence of these unmeasurable factors. Unless and until the intangible factors can be described by those who insist on their importance, and until there is some body of agreement in these descriptions, it will be extremely expensive to attempt to go further into this matter by use of research techniques. It would mean that each individual who has a "hunch" that he is aware of important intangible factors must himself be part of the tests, since these intangible factors in which he believes are part only of his pattern of belief. If, however, two or more persons can agree on a form of words which describes the intangible factors, that is, if these beliefs are communicable, there is then no reason why scientific tests should not be applied to them. Statistical methods are available for testing any theory which is communicable, and where the meaning derived from a form of words can be shown to be understood in substantially the same way by different persons.

METHODS OF ABSTRACTING THE DATA

IV.38   The personnel who were engaged in abstracting the information required for analysis were trained interviewers of the Government Social Survey and were under the direction of the authors. The items upon which information was to be sought from the files were listed and coded as indicated by the specimen working sheet given as Appendix II. The interviewers were required to search the file thoroughly for each item and to record the category into which the information fell on a record sheet. Each interviewer's work was subsequently checked by trained "coders" who would more often be referred to as "content analysts". The abstraction of the 60 items for one individual case took on average just over 5 hours.

IV.39   The data sheets, in code form, were than transposed to punched cards, and the necessary calculations and analysis were carried out by mechanical methods.

IV.40   Each card was numbered so that any item of information or any single code could be traced back to the original Borstal file or Borstal Association's record. No names were retained as identification after the initial abstraction of the information from the basic files, and any cross-reference to any specific case could only be made by reference to a key list held by one of the authors.

SUMMARY OF CHAPTER IV

S.IV.1.   The data upon which the information making up the statistical experience tables are based were derived from three main sources. These were:

Borstal files	Records summarising the past criminal records of the case and the information arising during Borstal training.
After-Care files	Records summarising the past records and giving details of resettlement.
Criminal Record Office files	Police records of crime.

Considerable difficulty was experienced in tracing the required records.

This was due to the fact that youths with further crimes had been recalled to Borstal or given prison sentences and the authorities had required the records at the new penal establishment. The worse the case, the more the records had moved around the country and the more difficult it was to obtain the file. Some files were not traced within the time available.

S.IV.2. Availability of information was itself correlated with success, and this meant that we had to modify the statistical procedures and lose information in the hope of reducing any bias that the differential availability of information might have caused.

S.IV.3. Some secondary procedures of interpretation were necessary to reduce to a comparable form the data from different Borstal Institutions where the form of recording was not standardised. Tests were made covering different interpretation systems. These were carried out in some detail in respect of Governors' and Housemasters' reports. It was thought that these reports should provide the best information which subjective methods of prognosis could give. It seems, however, that neither Governors nor Housemasters can provide good prognoses. Later thought suggested that this may not be surprising. It has been suggested to us that whilst Governors and House-masters might not be able to predict in general terms they have an excellent therapeutic intuition. Nothing in our results either proves or disproves this assertion.

REFERENCES TO CHAPTER IV

(1) R. A. Fisher, "The Design of Experiments" (1949, Oliver & Boyd).

(2) Sheldon and Eleanor Glueck, "500 Criminal Careers" (1930, New York, Alfred A. Knopf).

CHAPTER V

Descriptive Analyses

V.1 This chapter is devoted to the study of a number of direct analyses which serve as a description of the Borstal boys in our sample and is divided into several sections following a chronological order, from first crime record to after Borstal training. In most cases we have broken the sample into two groups, one the descriptive factor and the second the criterion of "success" or "failure". These direct simple analyses are of strictly limited utility. The association of each factor with the criterion is not essentially informative and in some cases superficial interpretation of this association ("zero order" correlation) may be misleading as we have already suggested and shall later go on to show. In particular it should perhaps again be emphasised that a significant "zero order" correlation is no suggestion of any basic causal association. At the most these tables and the resulting associations with the criterion may be regarded as signposts indicating a route for more detailed investigation. The main function of this chapter is to provide background data. Its utility is not to be found by direct "face value" interpretation but in cross-reference with similar basic material from other studies. It was also a necessary step in our progress towards estimating equations or prediction tables. It will be obvious to those who compare the basic material of this chapter with other criminological research that the factors where we report "zero order" correlations of significance are nearly always factors where others before us have found similar association with recidivism. (See Chapter I. History of Prediction.) Again, it may not be thought surprising that the basic factors of association which emerge from this study are so very similar to those found in many other countries of very different culture patterns. The material of this chapter is also an essential record since it sets a "base line" for further research either in this country or elsewhere—a base line both in time and in space.

V.2 The purpose, then, of providing these data is *not that conclusions may be based on them* but that they may serve an operational purpose in future researches.

V.3 The fact that the various types of backgrounds show very similar patterns of association with the criterion to those found in previous research, even although the approach was quite dissimilar, is a valuable argument. We find good cause to believe that predictions based on equations which in turn are based on these "stable" data might hold for other periods of time than that to which the data themselves relate. Some factors were significant ten or twenty years ago in the U.S.A., the same factors appear today both in that country and here, and may therefore be expected to hold in the near future also.

V.4 There seems then to be a stability about some of the characteristics which basically differentiate between the good risks and the recidivists. Other factors which we have used might be changed suddenly by administrative or legislative action and in these cases the association found in the current study would cease to hold. In these cases two classes of factor will be self-evident.

V.5 It is convenient in presenting these basic data to refer occasionally to by-products of the direct "main line" of analysis, and the order of presentation has been decided to facilitate this. For the convenience of readers who may wish to have a shorter reading plan the following is suggested for those interested in the specific subjects listed:

Subject	Paragraphs
Undetected crime	V.47–V.50
	V.99–V.101
	V.148
Population comparisons	V.61–V.66
	V.109–V.111
Open and closed institutions (effect of treatment in)	V.128–V.156
Period of detention (effect of)	V.147–V.156
Recommendations regarding subjective assessments	V.82–V.89
	V.157–V.161
Overlapping—effects of (practical proof)	V.83–V.85
	V.142–V.148

PART I

THE CRIME AND TREATMENT RECORD OF BORSTAL BOYS BEFORE COMMITTAL TO BORSTAL INSTITUTION .

V.6 When a young man between the age of 16 and 23 years is committed to Borstal, he has generally a record of crime behind him, and a variety of treatments have usually been tried. The majority of Borstal boys in our sample had begun their career of crime quite young; half of them had been found guilty by a Court before the age of 14 years, and 1 in 7 had commenced criminal activities before the age of 11. As might be expected, the earlier the career of crime was commenced the less likely were the lads to reform after Borstal training. In all except 14 cases we were able to establish with reasonable certainty the age at which the lad was first found guilty of an offence. These data are shown below for the two groups of cases—those who had been reconvicted of at least one crime after discharge from Borstal to the time of the closure of this project (failures) and those who had not been reconvicted of any further indictable crime (successes).

TABLE 1

The age at which Borstal boys were first found guilty by a Court, analysed according to criterion

Age	Success		Failure		Total	
	No.	%	No.	%	No.	%
16–21	122	54	104	46	226	100
12–15	141	44	167	54	308	100
11 or under	60	35	112	65	172	100
No information	3	21	11	79	14	100
Total	326	45	394	55	720	100

V.7 It is likely that a large proportion of the youths had started crime earlier than the age at which they were first convicted by a Court, but it is thought that details of very early misdemeanours might prove less reliable. In all except 26 cases we were able to trace information regarding the first recorded crime. Our source of these was mainly the Criminal Record Office of Scotland Yard. The data are given below.

TABLE 2

The age of first recorded crime, analysed according to criterion

Age	Success		Failure		Total	
	No.	%	No.	%	No.	%
16-22	128	53	114	47	242	100
12-15	181	46	152	54	283	100
11 or under	64	38	105	62	169	100
No information	3	12	23	88	26	100
Total	326	45	394	55	720	100

V.8 It will be seen that there was little difference between the above table and the preceding one showing the first conviction. This may be due to the fact that little attention is paid to very early crimes unless they are of such a nature as to give rise to a conviction. None of the records we have used for this study were designed for research purposes, but served, and were designed to meet problems in administrative action. Since administrative action is often avoided in the delinquencies of the very young, no record for administrative purposes would be required. This may explain some differences which may be noted between our findings and some American researches. For example, the Gluecks[1] (p. 143) found 28·8% below 12 at "first arrest", whilst 27·0% were in this age group at first delinquency; we found no difference.

THE FIRST OFFENCE

V.9 For statistical purposes there was no point in attempting to classify either the first or subsequent crimes into various groups; far too many fell into the general category of larceny.* On the hypothesis that the value of the property stolen might help to break down this large category in a way which might be related to post-training behaviour, an attempt was made to classify in this form. The attempt had to be relinquished after the pilot stages for lack of material upon which to make an assessment of value. It was considered that whilst it might be a mere matter of chance whether a youth who breaks and enters a place gets away with a large or small amount of value, none the less it may be reasonable to suggest that his future attitude to crime might be conditioned by his early "good or bad" fortune in this respect. The slight evidence we were able to find seemed to suggest that those who obtained a larger value of goods from their crime for which they were

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* Also the Gluecks found no significance in this classification.

committed to Borstal were subsequently more often successes,* but the differences were at too low a level of significance to permit us to say more than that our original hypothesis remained open.

V.10   Table 3, below, shows the analysis of first recorded crime (after pooling value categories) and the criterion.

TABLE 3

Type of first recorded crime analysed by criterion

Type of first recorded crime	Success		Failure		Total	
	No.	%	No.	%	No.	%
Assault	4		3		7	
Larceny	207	46	239	54	446	100
Burglary	6		8		14	
Receiving, fraud and forgery	8		12		20	
Sex offence	4	44	4	56	8	100
Wilful damage and breach of recognisances	11		13		24	
Absconding from Home Office School	1		1		2	
Others	26	45	32	55	58	100
No information	59	42	82	58	141	100
Total	326	45	394	55		100

V.11   So far as the standard form of classification of crime into types is concerned, we may confidently state that any association that there might be is extremely small. This may be due to the very small numbers of cases in some categories, and does not rule out the possibility of this factor being a useful discriminator in the study of groups of criminals where the types of crime are more heterogeneous.

HOME BACKGROUND AND AGE AT FIRST CONVICTION

V.12   Psychiatrists, criminologists and others have long emphasised the importance of home circumstances and background upon the future development of the young person. The records we were able to study did not give us very much information about the home or the family. We had only the subjective assessment of the home made by the official visitor or a Probation Officer and certain information on the composition of the family. It was not always clear that the same definition of "family" had been used by all persons reporting.

V.13   Such facts as were deducible from the assessments were available only in a restricted number of cases and could not be used in a study which sought to throw light upon the individual by analysis and comparison with a number of others. The official visitors' home report, for example, might have served as a guide in any one case (i.e. it might well serve its administrative purpose) but lack of a point of reference made statistical interpretation impossible.

* See V.51.

FAMILY

V.14 In all except 81 cases we were able to get some information about the family structure, subject to our reserve about the definition of family possibly varying between reporters. We show these data below in Table 4, analysed by the age at first conviction. In view of the small numbers in some cells we quote averages for certain groups, counting those convicted before the age of 11 years as though this were 11. The family composition relates to that found prior to the Borstal sentence and may not be the same as at the first finding of guilt. How severe this limitation might be cannot be stated.

TABLE 4

Type of family structure (at time of first recorded crime)
analysed by age at first conviction

Composition of family	No. in class		Average age at first conviction		Base for average
Wife and child/ren	11	} 254	14·5	} 13·0	11
Father and mother	34		13·0		34
Father, mother and sibs	209		13·0		206
Father only (no mother)	30	} 171	13·0	} 13·0	29
Father and stepmother	17		14·4		17
Mother only (no father)	95		14·1		95
Mother and stepfather	29	} 383	14·1		29
Institution/Forces	65		14·1	} 14·5	63
Lodgings/relations	79		14·8		78
Living alone	2		13·0		2
No fixed abode	66		13·0		66
No information	83		14·1		81
Total	**720**		**14·1**		**716**

* In a group of 606 Borstal lads studied by one of the authors before the war it was found that in 369 cases, i.e. slightly more than 50%, the lad had either no father or no mother or no parents at all or had not been brought up by his parents or that there was separation, divorce or desertion (Hermann Mannheim, "Social Aspects of Crime in England between the Wars", 1940, p. 255).

V.15 The above table is interesting in that the average age of first conviction for social backgrounds so widely separated as "complete home" and "no fixed abode" show no significant difference. There are, in fact, no significant differences between any of the mean ages of first conviction for any pair or other combination of categories. We must, however, be very cautious about forming any hypothesis on the basis of this table. The sample was a sample of Borstal intake, and does not reflect in any way what might be observed if we had sampled from a less selected population. We have thus, in this table, some information of value if an external comparison could be made.* We shall consider this later. Our purpose here is mainly concerned to show the

past record of crimes and punishments of Borstal youths without reference to external groups. Within this special group different patterns might often be found from those more usually described.

FIRST CONVICTION

V.16 We were able to ascertain in all except 68 cases the home town of the Borstal entrant. We classified these towns in various ways, seeking by this means to obtain some measure of the effects of the town environment. Unfortunately, we could not classify the environment more exactly than was possible within the administrative areas for which statistics are available. It was, for example, possible for a youth to come from a slum area of a good-class town and to be classified in the category appropriate to the town. Gray and Corlett[2] have, however, recently shown that an index of the social status of any area is available by expressing the number of jurors in the area as a fraction of the total population. This "J-index" can be compiled for any area which is geographically definable. These would open possibilities in future research.

V.17 The rateable value of house property is also a good indicator of the class and type of dwellings.[3] It would, it seems, be easy for this value to be ascertained for the address of each youth sent to Borstal, and this value taken into account with the number of persons sharing the accommodation, would give a good objective assessment of the standard of accommodation. In the present case we were not able to classify the environmental status of the individual home, nor could we say anything about the immediately surrounding neighbourhood of the dwelling in which the lad lived. We were, however, able to utilise the fact that the "social status" of a town was associated with the rateable value of "other hereditaments" a head of the population.[4] Similarly, the degree of industrialisation of any local authority area can be estimated from the ratio of industrial hereditaments to other hereditaments value.[5] The following three tables show the average age of the first

TABLE 5

*Average age at first recorded crime,
analysed according to the rateable value
("other") a head of population* *

Rateable value a head	Number of cases	Average age at first conviction
London	147	15·2
£10 and over	29	13·9
£9	32	14·2
£8	120	13·9
£7	60	14·1
£6	115	14·5
£5	45	13·8
£4	31	14·2
£3	10	13·8
Rural areas	65	14·1
No information	68	13·9
Total	720	14·1

* A measure of social status of the town.

conviction of the Borstal boys according to these two factors of town "status" and according to the size of the town.

V.18 If we consider London against the rest of the country, the difference in the average age of the first conviction is "significant". The difference is of small significance, however, due to the large variation in the ages at which the lads were first convicted.

V.19 In using these data we are clutching at straws of ecological and social information because no other information covering this field was available. The inadequacy of these data as indicators of social and economic status and environmental conditions is realised.

TABLE 6

Average age at first recorded crime analysed according to an index of industrialisation of the town of residence at Borstal conviction

Industrialisation Index number	Number of cases	Average age of first conviction
London	148	15·2
100 and over	15	14·3
70–99	11	13·0
40–69	124	14·3
20–39	204	13·6
10–19	32	13·9
1–9	91	14·1
Scotland	10	13·6
No information	85	14·0
Total	720	14·1

TABLE 7

Average age at first recorded crime, analysed according to size of the town of residence at Borstal conviction

Population of town	Number of cases	Average age of first conviction
London	147	15·2
100,000 and over	255	13·6
40,000–99,999	112	14·1
20,000–39,999	14	13·8
10,000–19,999	22	14·4
5,000–10,000	40	14·5
Under 10,000	61	14·1
No information	69	14·1
Total	720	14·1

V.20 As may be expected, these sort of analyses were too coarse to provide much of value. If we could say more about the economic and social factors of the homes from which these lads came, and if we could make an assessment of the status of their home within the community—where by community we mean some local geographical area smaller than the whole town—we might be able to find some ecological factors in criminal behaviour. Some better assessments are now possible by the use of various indices. In future studies the "J-index", for example,[2] might provide a good measure of the social status of the *immediate neighbourhood* of the delinquent's home. In this study, however, the records available were such that this could not be done economically.

INSTITUTIONAL RECORD

V.21 Although we were able to get little valid data about the home conditions and the immediate environmental factors, it appeared that we could ascertain with a fair degree of accuracy whether or not the youth had, at any time in the past, been deprived of home life by spending any time in an institution. For this purpose Home Office Approved Schools were not regarded as "institutions". There were some 65 cases where the papers on which it would have been expected to find information regarding institutionalisation were missing. In these cases it would be biasing the group for whom there was no record of institutional life (but for whom the papers has recorded were present in the file) if both classes were treated together. The difficulty we experienced here would be overcome if blanks were not admitted and reporting officers were required to insert "No", or "Does not apply". As it was, we could never be sure that a blank space indicated that the youth had *not* been to an institution; there was always the possibility that the record was incomplete in this respect. This same problem presented itself in various forms in most of the items we considered. Accordingly, in the table below, we distinguish cases where there was no information (i.e. no relevant papers) and cases where there was no record of institutional life but where the relevant papers were available (the " none recorded " group).

TABLE 8

Whether the youth had had any experience of institutional life (other than Home Office Approved School) before Borstal sentence, analysed by the criterion

Whether any institutional record	Success		Failure		Total	
	No.	%	No.	%	No.	%
Several years	22	39	34	61	56	100
Short period	33	49	35	51	68	100
None recorded	253	49	265	51	518	100
No information	18	23	60	77	78	100
Total	326	45	394	55	720	100

V.22   It is clear that those who had had long experience of deprivation of home life afforded a worse risk of failure than those where there was no trace of such information, and where lack of such information might be interpreted as meaning that the lad had not been deprived of home life (except as a result of his criminal career). A short period of time in an institution does not seem to affect the risk of failure, but the numbers are too small to suggest this with any degree of confidence.

PRIOR CONVICTIONS AND TREATMENTS

V.23   We have seen that some of the sample gained experience of the Courts fairly early in life—at an average age of just over 14 years. The majority had also had a fairly intensive experience of the Courts. In view of the state of the law before the passing of the Criminal Justice Act, 1948, very few boys were sent to Borstal for first offences. In the present sample there were 47 such cases out of 710 (10 minutes), or 7% of the total Borstal intake. The most common number of previous Court appearances resulting in a finding of guilt for the Borstal population was 4, with an average of 4·24 including that appearance which resulted in the Borstal sentence and which accordingly brought them within the scope of our sample. We show below the number of Court appearances resulting in a finding of guilt for the sample analysed according to our criterion of success or failure.

TABLE 9

Number of Court appearances resulting in a finding of guilt, analysed according to criterion of success or failure

Number of appearances	Successes		Failures		Total	
	No.	%	No.	%	No.	%
1–3	167	59	116	41	283	100
4–5	105	42	148	58	254	100
6 and over	53	31	120	69	173	100
No information	nil		10		10	
Total	326	45	394	55	720	100

V.24   It will be noted that the more of these youths had appeared in Court before Borstal training, the more likely were they to be failures. It is not clear how much of this result may be taken on its face value. It may be that those who were sent to Borstal at a first or second appearance in a Court were sent as a result of crimes taken into account or for other special reason, and that some of the subsequent failures which occur after the period of closure of our follow-up may occur in this group. There seems to be some likelihood that those who managed to avoid arrest for some time (i.e. had a fair number of crimes taken into account) before Borstal sentence might manage also to avoid arrest for some time after discharge from Borstal. Thus if they succeeded in avoiding arrest for two or three years, they would appear in our criterion as successes whilst they should be classified as failures. A small number of such cases could affect our results in this respect. We shall, however, subsequently examine this problem in more detail and show that it is not of significance.

FINES

V.25 There seems to be fruitful ground for further research in the sub-analysis which we made of previous convictions. We isolated convictions which resulted only in fines. About 30% of our sample had at some time been fined, and the success rate amongst those who had been fined was lower (35%) than for those who had not (52%). This is a significant difference. The detailed analysis is given below.

TABLE 10

*Number of convictions resulting in fines,
analysed according to criterion*

Number of convictions resulting in fines	Successes		Failures		Total	
	No.	%	No.	%	No.	%
None	254	52	239	48	493	100
One	39	30 }35	90	70 }65	129	100
Two or more	33	42	46	58	79	100
No information	—		19		19	—
Total	326	45	394	55	720	100

V.26 It is safe to assume that those who have been fined represent a worse risk than those who have not, but no suggestion as to why this should be so can be made. It might have been of value to have studied the data relating to age at which fines were imposed. Unfortunately, this was not possible.

PROBATION

V.27 Of our sample, 62% had had experience of probation before being sent to Borstal. We found that a lad who had in the past been put on probation represented a slightly worse risk than one who was sent to Borstal not having had a period of probation.

TABLE 11

Whether previously on probation, analysed according to criterion

Probation?	Successes		Failures		Total	
	No.	%	No.	%	No.	%
Probation	200	45	246	55	446	100
Not on probation	126	51	123	49	249	100
No information	0	0	25	100	25	100
Total	326	45	394	55	720	100

V.28 There is in the above table a further illustration of the error of direct interpretation of zero order associations. Younger offenders were, as we shall show, more likely to be put on probation, and offenders who began their crime careers early in life were more likely to prove bad risks even after Borstal training.* It will later be shown that although probation appears to be associated with a failure risk above the average, this could be almost completely accounted for by the correlation between the early age of the first crime and the likelihood of probation.

V.29 To the lay mind it might seem that both probation and fining represent lenient forms of punishment. It is shown, however, that the latter was associated with a higher likelihood of failure than the former. Both these differences might, however, arise from factors in the selection of punishments by the Courts.

V.30 Although we cannot, on the limited data available from this study, say very much about the effectiveness of various forms of punishment, we collected considerable data which might later be of value. We record in some of the few following tables some of the facts which we have obtained which were associated with the probationary experience of Borstal boys.

V.31 The periods of time for which the ex-Borstal boys remained free from further convictions after release on licence up to the time of the closure of the follow-up are shown below.

TABLE 12

Period crime free after release from Borstal, analysed according to whether probation had been experienced in the past

Period crime free	Probationers		Never on probation		No information		Total	
	No.	%	No.	%	No.	%	No.	%
Less than 3 months	38	65	19	88	1	2	58	100
3–6 months	49	58	35	42	—	—	84	100
6–12 months	65	73	21	23	4	4	90	100
12–24 months	55	64	28	33	3	3	86	100
Over 2 years	32	68	13	28	2	4	47	100
No recorded crime	199	61	129	39	—	—	328	100
No information	8		4		15		27	
Total	446	62	249	35	25	3	720	100

V.32 Another analysis which throws some light on this problem is that which analyses the number of crimes committed whilst on licence and up to the period until the closure of the follow-up.

* See Table 1.

TABLE 13

Number of recorded convictions on licence to the end of the follow-up period, analysed by whether probation had been experienced in the past

Number of crimes	Probationers		Never on probation		No information		Total	
	No.	%	No.	%	No.	%	No.	%
None recorded	200	61	126	39	—	—	326	100
1	83	64	44	34	2	2	129	100
2–3	84	64	40	31	6	5	130	100
4–5	34	76	11	24	—	—	45	100
6 or more	34	67	17	33			51	100
Absconded not recaptured	1		5				6	
Sent to prison	7		4		6		17	
No information	3		2		11		16	
Total	**446**	**62**	**249**	**35**	**25**	**3**	**729**	**100**

V.33 Perhaps the most interesting analysis regarding the problem of the effect of probation, so far as this study can take the matter, is that which analyses the age at first conviction by whether or not the youth had ever been on probation. It will be recalled that the earlier the age at which crime was begun the worse the risk of failure after Borstal training. It will be shown in the table below that the earlier crime was begun the more likely was it that the youth had been on probation in the past. Since the younger the youth began

TABLE 14

Age at first recorded conviction and whether or not the youth had been on probation

Age at first recorded crime	Probation		No probation		No information		Total	
	No.	%	No.	%	No.	%	No.	%
21 and over	2				1		6	
20	4		10				11	
19	16	48	10	48			25	100
18	22		15		3	4	40	
17	31		40		3		74	
16	45		85		2		82	
	50		26		6			
15	49		19					
14	49	66	18	30	8	4	71	100
16	66		15		3		77	
12	48		21		1		70	
11	69		12		2		80	
Under 11	91	77	21	19	3	4	116	100
No information	10		21		4		26	
Total	**446**	**62**	**249**	**35**	**25**	**3**	**729**	**100**

crime the more likely he was to be a failure, we may say that there was a positive correlation between success and age of commencing crime. Also the younger crime was begun, the more likely was the youth to have been on probation, thus there was a negative correlation between probation and age of commencement of crime—the younger the more likely was there to have been pro- bation. In order to be able to assess the meaning of a period on probation (with its attendant default) somewhat more accurately than the zero order correlations show, we may hold constant (or take out of the picture) the factor of age at first conviction. The basic data are shown in Table 14.

V.84 We may not take our analysis very far, but we may perhaps make some suggestions from theory as to what the position might be if the data were able to withstand more detailed treatment. If we refer to the pro- bationers as "p", to the age of commencement of crime as "c", and to suc- cess as "s", we may conveniently refer to the correlation between probation and success as Rps, and to the correlation between probation and age of commencement of crime as Rpc. Given certain assumptions of a mathe- matical nature, we may suggest what would be the correlation between "p" and "s", holding "c" constant. We derive the following values, Rps —0·055, Rpc—0·248, Rcs +0·132. Thus we arrive at Rps.c (holding c constant) —0·024. In other words, if we take out *only* the factor of the age at which crime began, we find the association between probation and failure drops from 0·055 to 0·024—an insignificant figure. We are, by this means, taking into account in our assessment of the value of probation some measure of the sorts of material upon which probation officers had to work, but by no means all.

V.85 These calculations are given by way of illustration of a method which might be considered in the future rather than an adequate and valid assess- ment of the value of probation. It should, of course, be remembered that our sample of ex-probationers is severely limited—they all went to Borstal, and a period on probation means that a crime had been committed.

HOME OFFICE APPROVED SCHOOL

V.86 Like probation, experience of a Home Office Approved School in the past record of a Borstal boy augurs badly for his subsequent success. This is again doubtless due in some measure to the positive association between early crime and the likelihood of being sent to an Approved School. There are possibilities of other considerations also. Let us consider these by an example. Suppose that a youth had committed a crime and was before the Courts. The crime was such that he might be either fined, put on probation or sent to an Approved School, and his age did not disqualify him from any of these treatments. If the Court were persuaded that he came from a good home and had a high probability of making good, he may well be put on proba- tion, if on the other hand his home influence was assessed as bad, he might be sent to an Approved School. If the crime was a minor one, and the home conditions good and nothing of significance was known against the lad, he may be fined. It may then be that the same factors which persuade the Court to put a lad on probation in the first instance are factors which may make for his relative success after leaving Borstal, whilst those factors which influence a Court towards a committal to an Approved School are those which have the opposite effect. These factors, at the moment, we know nothing about.

V.87 The analysis of Approved School experience and the criterion are shown in Table 15:

TABLE 15

Experience of Home Office Approved School,
analysed according to criterion

	Successes		Failures		Total	
	No.	%	No.	%	No.	%
Never at Home Office Approved School	226	55	184	45	410	100
At Approved School	95	34	186	66	281	100
No information	5		24		29	
Total	326	45	394	55	720	100

V.88 It is quite certain that a period of time spent at a Home Office Approved School is prognostic of failure after Borstal training. This does not necessarily reflect in any way upon the treatment at such schools. It may be that those cases which do not show promise early in their career are sent to such schools rather than given other treatment and that the sorting of the cases is, in general, an effective process. There are also many other explanations. For purposes of predicting the success of Borstal youths, however, we need not concern ourselves with these; we may utilise the facts as we find them.

V.89 Although none of our findings regarding the association between past crimes and treatments can be held to reflect upon the effectiveness of such treatments, they may help to provide a guide to an assessment of such treatments when further research has been carried out. At the moment we are dealing with a more or less complete sample of Borstal boys but only a very biased sample of ex-probationers and ex-Home Office Approved School boys.*

ABSCONDING FROM APPROVED SCHOOLS

V.40 Absconding from Approved Schools was found to be very frequent amongst those who subsequently found themselves in Borstal. If we ignore those absconders from Approved Schools who were sent to Borstal because of this fact, we find that 118 out of a total of 247 had absconded at least once during their term at the school. It is not known whether this represents a higher rate than is usual for Approved School boys who do not appear later in Borstal. There was, however, a significant association between failure after Borstal treatment and a prior record of absconding from Approved Schools. These data are shown in Table 16.

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* It is reasonable to suppose that those cases where many different treatments have been tried and failed are more likely to fail when given a different treatment (Borstal) later. Our sample of probationers, ex-Approved School boys and fixed young persons are all failures for these treatments, otherwise they would not have been in our sample.

TABLE 16

Abscondings from Approved School, analysed according to criterion

Number of abscondings	Successes		Failures		Total	
	No.	%	No.	%	No.	%
Not at Home Office Approved School	220	57	166	43	386	100
No abscondings	50	38	82	62	132	100
One	22	35	40	65	62	100
Two or more	21	30	49	70	70	100
No information	13	19	57	81	70	100
Total	326	45	394	55	720	100

V.41   Those Borstal boys who in their past record been sent to an Approved School thus provided a far better risk in Borstal than those who had, whilst those who had not only been sent to an Approved School, but who also had a record of absconding one or more from such schools were quite bad risks—nearly twice as bad a risk as those with no experience of Approved Schools.

OTHER INSTITUTIONAL EXPERIENCE

V.42   We have earlier shown that 124 out of 643 known cases in our sample had had a period of time at an institution other than an Approved School, with 86 cases having been deprived of home life for a period of several years. We examine now the concomitance of these.

V.43   Fifty of the Approved School boys in the sample had had other institutional experience, and of the total sample about half had had experience of either an Approved School or other institution.   We give these data.

TABLE 17

Approved School and other institutional experience in the total sample of Borstal cases

Approved School	Other Institutional Record						No information		Total	
	None		Short time		Several years					
	No.	%	No.	%	No.	%	No.	%	No.	%
None	316	77	39	10	33	8	22	5	410	100
At Approved School	201	72	28	10	22	8	30	10	281	100
No information	1		1		1		26		29	
Total	518	72	68	9	56	8	78	11	720	100

V.44 We may thus summarise the experience of institutional life of the sample of Borstal boys as follows:

At both institution and Home Office School	.	50
At Home Office School but not other institution	.	201
At other institution but not Home Office School	.	72
Neither Home Office School or other institution	.	316
Total known cases	.	639
No information	.	81

(The "201", "50", "72" are braced with "47%".)

V.45 This, apart from any other finding, is quite remarkable. Out of a total sample of 639 known cases, representative of the Borstal population in 1946–7, half had had some institutional experience before committal. By far the larger part of this prior institutionalism was due to previous crimes, but in at least 122 cases (18%) this is not so. It seems certain that far more Borstal boys have had experience of institutional life (not associated with crimes) than would be the case if Borstal boys were a cross-section of the population of adolescents. Cause is not, however, suggested by these correlations. If the youths who had been in institutions had not been in institutions we do not know whether they would have managed to keep clear of Borstal. It seems likely that the "causal basis" (whatever this may mean or be) which relates to institutionalism and to crimes which lead to Borstal is in the same or similar configuration of "causes". In human situations the direct simple interpretation is seldom the full or correct one. But again, this does not prevent the use of these correlations within their limited sphere of operational use as guides for action and as pointers to further research.

DRUNKENNESS

V.46 One of the strongest associations between failure and previous history of misdemeanour is found in the case of those who have been charged with drunkenness or where there was evidence of excessive drinking. In the sample there were 32 cases of lads who fell into this category, and only 3 were successes after Borstal training.

OTHER CRIME RECORD

V.47 Our consideration of the previous crime record of Borstal boys would not be complete if we did not consider the number of crimes taken into account at the time of the Borstal sentence. In nearly two-thirds of the cases in our sample the youth asked for other crimes to be taken into account when he was before the Courts on the charge which resulted in his becoming one of our sample. Crimes taken into account are, for a time at least, undetected crimes, and as such we may find the information useful.

V.48 In only 36% of the cases was the crime for which the lad was sent to Borstal the only one taken into account in the Court's decision. In these cases there may have been also a previous history of crime which had been detected and for which prior punishment had been received. About 12% had eight or more crimes to be "taken into account", when on the charge resulting in Borstal training. The detailed analysis is given below.

TABLE 18

Number of crimes "taken into account" when committed to Borstal
training, analysed according to criterion

Number of crimes	Successes		Failures		Total	
	No.	%	No.	%	No.	%
None	104	43	136	57	240	100
1–2	104	47	117	53	221	100
3–4	50	} 50	33	} 47	83	100
5 or more	50	} 52	48	} 49	98	100
No information	15	21	49	79	62	100
Total	226	45	394	55	720	100

V.49   The data given in this table might throw light on two hypotheses. We
might take the view that experience of "getting away with" a fair number of
crimes before apprehension might lead the youths to consider that they might
"get away with it" again, and to be prognostic of failure.   Unfortunately,
it is not possible to test this hypothesis.   It is also possible that those who
managed before their Borstal sentence to avoid arrest for some little time
might similarly manage to avoid arrest for some time after release, although
they might have committed further crime.   If they had so managed to avoid
arrest to the extent of three or four years, they might have shown in our
criterion as "successes" and not as the "failures" they really were.   If this
factor of differential rates of detection were a serious objection to our criterion,
we should expect to find the association between the number of crimes taken
into account and the proportion regarded as successes to be a linear association.
This did not appear to be so.   Although we had only 114 cases in the
category who avoided arrest for five or more offences before being apprehended
and committed to Borstal, this group showed a significantly higher failure
rate than the group who had only three or four crimes taken into account,
and a rate no different from those with only one or two crimes taken into
account.   But the *first three entries* in Table 18 do suggest that either those
who had several cases taken into account had avoided detection more fre-
quently after discharge, or that they were in fact more often "successes."
We are left with the problem of deciding whether the apparent trend of the
nil–4 crimes taken into account is more likely to be valid than the five or more
group.   We may make a statistical test by fitting a line which is the best fit
for both observations and our hypothesis and testing whether the departure
from linearity is likely to have been due to chance.   The result of this test
shows that the hypothesis of linearity is unlikely to be true, but we cannot
state this with much confidence.   This seems to suggest that a study of crimes
taken into account would be a rewarding line for research both with regard
to prediction studies and wider fields of criminology.*

V.50   The problem of undetected crime is a difficult one and crimes taken into
account are only undetected in a very special sense.   In our case we were

* See also "Social Aspects of Crime," by Dr. H. Mannheim (1940), pp. 44–6.

concerned with this problem only in so far as it might have affected our criterion of success or failure. It seems that we may regard our period of follow-up as adequate. The failures who were likely to be apprehended had in general been apprehended by the time our follow-up ended. Those others who might have committed crimes which remained undetected were treated as successes, and we can only assume that the proportion was small. In any case no other unequivocal criterion existed. There is other evidence which leads us to believe that this approach is sound and we shall now direct our attention to a part of this and take the subject up again later (see V.99–101). Let us assume that those who had no crimes taken into account at their Borstal sentence represent those who were more easily detected, and that the fact that they were detected before they had accumulated a record to be accounted for predicts that they are likely to be detected in further crime after release more quickly than those who at their Borstal sentence had several undetected crimes for which to account. From what is known about criminal habits this seems likely. Then we note that the overall success rate was 45%, whilst for this group it was 43%—an insignificant difference. But our unknown cases bias this result and we might reasonably compare the 43% with the 53% "successes" who in 1946–7 had three or more undetected crimes taken into account. If we could be certain of this comparison we might suggest that 10% of this group of 114 cases were likely to be classified wrongly —that, in fact, a further 11 cases classified as "successes" were, in fact, failures and that this will become evident when they are later apprehended. Some few additional failures might come from the other group also, but the total incorrectly classified would not appear by this theory to be large. It is material to ask how this would affect our results. Clearly it affects in some measure all our zero order correlation tables, since any factor which is associated with "undetected crime" will show an increment as though the factor were associated with success. We accordingly studied the factors to see whether there was any indication of this. The only factor which emerged as of any importance in this respect was that of intelligence.* The more intelligent had more crimes taken into account at their Borstal sentence. This suggests that the more intelligent the criminal the more difficult was detection; surely a reasonable suggestion. The *factor of intelligence may, therefore, be associated with " success" because of the interpretation of the criterion of success.* This argument serves merely to show the value to this form of analyses of the data relating to crimes taken into account, but since we cannot be sure of the basis for our comparison in our present data, no other purpose is served. We could not obtain reliable data relating to crimes taken into account for earlier convictions than that which resulted in the Borstal sentence. This was, it now appears, unfortunate.

PART II

BORSTAL CRIME

TYPE

V.51 The last incident in the career of crime before committal to Borstal— the dividing point in our time factor in this study—was not studied in any great detail. We established quite early during the pilot tests that a classifi- cation of the main group of criminal activity (larceny) into values of the goods

* See V.99–101

obtained was not possible. No other classification was that we could then devise gave us any degree of diversity in the classification. As variation was essential if statistical methods are to be applied, costs were cut, and the extraction of the information was not completed. Since the valuation coding of the items stolen might be of interest, we give below the incomplete data.

TABLE 19

Type of crime for which committed to Borstal, analysed by criterion

Type of crime			Success	Failure	Total
Assault			9	2	11
Breaking and entering					
robbery and larceny	0–£50		69	54	123
	£5–£50	56 }168		39 }121	95 }289
	Over £50		43	28	71
Burglary	up to £5		8	1	9
(9 p.m.–6 a.m.)	£5 to £50	6 }19		4 }7	10 }26
	Over £50		5	3	7
Receiving, fraud and forgery			2	2	4
Sex offences			3	2	5
Wilful damage and arson			1	1	2
Absconding from Home Office Approved School			2	15	17
Others including breach of recognition			6	6	12
No information			104*	242*	346
Total			326	394	720

* This large component of no information is due to the requirement to assess the value of the property stolen.

V.52 As Table 3, we presented similar data relating to the first recorded crime, and our observations made then apply also to these data.

LONE OR ASSOCIATED

V.53 So far as information was available, it seems that the majority of crimes which led to Borstal were "associated" crimes. A study of the data given in Table 20 (below) will, however, soon make it clear that our information was very poor. We show, for example, 28 cases where the youth was the leader, and 226 cases where the lad was "associated" in crime with others. If we assume that in any "association" one man must be the leader, this gives the average size of the gang as $(226+28 \div 28)$ nine. On the other hand we may assume that in a large number of cases the association was one of mutual responsibility, an association of equal partners with no leader. It might have been helpful if there were definitely known. In any case, since it is unreasonable to suppose the average group size to be as large as nine, we cannot assume that the "associated" group represented only those who were led by others. The group needs breaking down into two classes at least—(a) member of leaderless gang (i.e. equal partners in crime), (b) member of gang with leader (i.e. not leader).

TABLE 20

Lone or associated crime, analyzed by criterion

Lone or associated crime	Success		Failure		Total	
	No.	%	No.	%	No.	%
Leader of crime gang	15	54	13	46	28	100
Associated	139	62	87	38	226	100
Lone	68	59	48	41	116	100
No information	104	30	246	70	350	100
Total	326	45	394	55	720	100

V.54 It thus seems that leaders were worse risks than all others—but not to a very large degree, and that lone criminals fall next in risk order. The findings in this study have no significance on their own, and these data are included only because they are strongly supported by other studies, and it was incumbent upon us to examine the matter as far as our data would allow.

PART III

ENVIRONMENTAL FACTORS

V.55 In this section the analyses will be parallel in many respects to those given in the first part of this chapter, except that we shall now be discussing factors relevant to the "Borstal crime" and not the first conviction.

NATIONALITY

V.56 The majority of Borstal boys in our sample were born in England; in fact, the numbers who came from the other parts of Great Britain were too small to suggest any significant differences, except that, when compared with the population "at risk", there were significantly fewer boys in our sample who were born in Scotland. There was and is, however, a Scottish Borstal not coming under the authority of the Prison Commissioners, and which could not be included in this inquiry. The Scottish lads in our sample were, therefore, those who, although born in Scotland, had made their home in England. The data regarding the place of birth of the sample are given below:

TABLE 21

Place of birth of the sample of Borstal boys

Place of birth	Successes	Failures	Total
England	284	306	590
Scotland	7	11	18
Wales	14	20	34
Ireland	8	4	12
Other	3	4	7
No information	10	49	59
Total	326	394	720

V.57   These figures were compared with the population of the areas concerned of the appropriate ages, and there was no significant difference between the total number of boys who (relative to population) find their way into Borstal, nor was there any significant difference between the success rate for the different origins.

FAMILY STRUCTURE

V.58   It was possible to find data relating to the number of persons in the subject's household in little more than half of the cases studied. From these cases it does not appear that there was any strong association between the size of the household and the likelihood of subsequent success or failure. It seems clear, however, that the distribution of household sizes in respect of the Borstal boys' sample differed markedly from the household sizes for adolescents' households in general. From a survey of young persons between the ages of 15 and 20 years [7] (an age group roughly comparable with that of the present sample) we quote the general population household size where the household included an adolescent of the appropriate age range. It will be noted, however, that the date of the two sets of data differs—the Borstal boys were in their homes in 1946–7 whilst the general population related to early 1950. Between 1947 and 1950 there was doubtless some improvement in the housing situation, but this improvement could not account for all the difference observed.

V.59   We show below as Table 22 the Borstal sample analysed according to success and failure rates, and as Table 23 the comparison of the total Borstal sample with that of the general population.

TABLE 22

Number of persons in the household,
analysed according to criterion

Number of persons in household	Successes		Failures		Total	
	No.	%	No.	%	No.	%
Up to 3 persons	68	59 }	48	41 }	116	
4	26	74 }92	9	26 }38	35	}100
5	29	63 /	17	37 /	46	
6	25	76 }	8	24 }	33	
7	15	56 }57	12	44 }43	27	}100
8 or more	36	49 /	37	51 /	72	
Institution, etc.	3	—	2	—	4	
No information	126	33	201	67	327	100
Total	326	45	394	55	720	100

V.60   The main difficulty in interpreting Table 22 was the large number of cases for whom information was not available, and who were more likely to be failures than those for whom information was obtained. It might be supposed that the differences between the Borstal sample and the general population sample might be greater if the Borstal sample were complete and we had included the bad risks equally with the better ones.

TABLE 23

Comparison of the number in household in the Borstal sample and a general population sample of adolescents

Number of persons in household	Borstal sample	General population of adolescents
	%	%
Up to 3 persons	33	21
4	10	26
5	14	20
6	10	12
7	8	8
8 or more	22	9
Not at home	1	4
Total	333 (100%)	1390 (100%)

Note. Total for the Borstal sample excludes 387 cases for whom the information was not available in the records.

V.61 There seems to be some utility in these sorts of data, but without knowledge of the number of rooms available to the households of different sizes it is not possible to use the measure to the best advantage. It is interesting, however, to speculate why an excess of Borstal boys (for whom information was available) came from the larger *and* from the smaller households. It may be that the smaller homes tended more often to be "broken homes", and that if this factor were reversed a simple progressive difference might be observed. On the other hand it may be suggested, as indeed has often been done, that the "only child" is the "problem child". It is unfortunate that these data do not withstand detailed analysis of this kind. It is, however, known that there is a strong association between large households and the incidence of overcrowding, and we can examine the hypothesis about only children.

V.62 From the survey previously quoted [7] we have abstracted a table which shows the high association between large households and overcrowding of dwellings.

TABLE 24

General population of adolescents. Number of persons in household analysed by accommodation level

| Number in household | Rooms per person | | | | | | Not at home | Total |
	up to ½	¾	1	1½	2	3 or more		
	%	%	%	%	%	%	%	%
Up to 3	—	3	5	11	2	—		21
4	1	3	15	5	2			26
5	1	2	12	5				20
6	1	2	7	1				12
7	3	2	1					8
8 or more	1	5	1					9
Not at home							4	4
Total	7	10	29	25	13	3	4	1390 (100%)

V.63   We are justified, it seems, in assuming that Borstal boys were more frequently found in the larger, and thus more likely, overcrowded households, and also in the smaller households which may tend to be "broken homes". Better data are needed before this point can be adequately explored.

V.64   From further analysis and comparisons with the general adolescent sample it does not appear that the "only child" was a more likely entrant to Borstal than where the family included siblings; in fact, the reverse was true. We show below a classification of family structure for the total sample of cases compared with a similar classification for the total adolescent sample inquiry.

TABLE 25

Family structure of Borstal sample compared with a general population sample of young males

Family structure	Borstal sample		General population sample
	No.	%	%
Only child with both parents	34	6	17
Mother, father and siblings	209	} 45	62
Father and stepmother	17		
Mother and stepfather	29		
No father	95	} 22	11 } 14
No mother	30		3 }
Not living with either parent	158	27	7
Total	572	100	1390 (100%)

Note: Excludes 83 cases for whom there was no trace of the information and 65 H.M. Forces or institutional cases.

V.65   In the general male population between the ages of 15 and 20 years, excluding those who were serving in the Forces, 17% were living with their parents with no other children in the household at the time of the inquiry, whilst in the Borstal sample we found only 6% in a similar classification. In the general population sample it was not (for the purpose of the specific inquiry for which the data were collected) necessary to differentiate between blood and step relations.   By similar pooling of the appropriate categories in the Borstal sample, we find that the "normal home"—mother, father and siblings—accounted for only 45% of the cases, whilst in the general population 62% fell into this category.   If we define a "broken home" as one where one or other parent was absent, we find that 14% of the general adolescent population fall into this class, compared with 22% of the Borstal boys.

V.66   The value of these data for purposes of comparison is difficult to assess because the two sets of data were originally obtained for two entirely different purposes, and whilst the general population data relate to a specified date and to the condition applying in the home at that date, it was not often clear to which time the narrative report of the home circumstances of the Borstal boy related.   The former data were collected in the field to rigorously defined categories, whilst the latter were placed in the categories by interpretation

afterwards. The classification of the narrative reports into the categories was carried out by the same staff as was employed on the earlier field study. V.67 It seems fairly clear that we need to know more about the group who were living in lodgings or boarding houses. Those who were in fact living in "broken homes" did not seem to be a serious problem, but rather those who had no homes. This latter stage may be reached via the earlier stage of the breaking up of the home, by or various other ways. No light can be thrown upon this at the moment.

V.68 We may pool the small categories and examine the association between our criterion and the type of home background of Borstal boys as derived from interpretation of narrative reports. These data are given below:

TABLE 26

*Type of home background before Borstal,
analysed by criterion*

Type of home background	Success		Failure		Total	
	No.	%	No.	%	No.	%
"Complete" home	159	53	141	47	300	100
"Broken" home	72	57	55	43	127	100
No home	79	38	131	62	210	100
No information	16	19	67	81	83	100
Total	326	45	394	55	720	100

$\chi^2 = 15.51$ for 2 degrees of freedom
P less than 1% level
$r\phi = \cdot207$

V.69 This shows that although more boys entered Borstal from "broken homes" than would be expected if the Borstal entry was drawn equally from complete and "broken homes", those from "broken homes" after Borstal training did not appear to be worse risks than those from complete homes.
V.70 It might be thought that it is not so much the type of home (broken or otherwise) that helps the prognosis after treatment, as the quality of the home. These sorts of data are examined after we have exhausted the objectively tested factors relating to home background. If we may anticipate briefly these analyses, we may say that, so far as any of our information was concerned, no factors in home background afforded a useful prognosis before Borstal, so long as there was a home background of some kind. The same general finding applied to resettlement. (See V.164.)

SIBLINGS

V.71 In all but 118 cases we were able to trace information about the number of brothers and sisters (including half-brother and -sisters) in the Borstal boy's family. There seemed to be some better chance of those boys who came from the smaller families making good after treatment, but the difference was small.

TABLE 27

Number of siblings, analysed by criterion

Number of siblings	Successes		Failures		Total	
	No.	%	No.	%	No.	%
10 or more	6	47	9	53	15	100
9	12		13		25	
8	12		12		24	
7	17		22		36	
6	20	48	19	52	50	100
5	28		37		65	
4	40		42		82	
3	51	52	42	48	93	100
2	40		41		81	
1	35		28		63	
Nil	27		22		50	
No information	28	24	90	76	118	100
Total	325	45	304	55	720	100

V.72 Whilst there was some slight association between the number of siblings and the likelihood of success, this association was not so large as that reported in some American studies. These data, however, had to be found amongst unsystematic narrative reports of various kinds, and in some cases the facts may derive from doubtful sources.

SOCIAL STATUS OF THE HOUSEHOLD

V.73 Our data in respect of the social and economic status of the households from which the Borstal boys came was deficient in many respects. We could ascertain the occupation of the head of the household (usually the lad's father) in only just over 100 cases out of the 720. From these cases it seemed that those who came from homes where the head of the household was in a supervisory grade or a clerical or distributive occupation, the lad afforded a better risk than all others. On the present data this cannot be stated with any certainty, and there seems no point in producing the tabulation of these results.

V.74 Another factor regarding the household and environment of the Borstal population which seems to hold promise of useful results, but which because of the paucity of the data we could not follow up, was the length of stay at the same address—the address at which the youth lived at the time of the crime. It is quite clear that those who had lived at the same address since childhood were a better risk than those who had moved their homes frequently. This correlation would doubtless be enhanced if more was known about the mobility of the general population. It is reasonably certain that those persons who are in the upper-income groups (and who appear to be more often successes) move their homes more frequently than do households in the lower-income groups.* It seems that the majority of Borstal boys

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* This finding is derived from a technical sampling research carried out by the Social Survey (unpublished).

come from homes in the lower-income classes. There appears to be ground worth exploration in future studies of criminal prediction in the study of mobility. Perhaps mobility is associated with the commission of crime—the lad moves because he fears detection.

V.75 We give below the data in respect of the cases where we could obtain fair evidence of the duration of stay at the last address.

TABLE 28

Duration of stay at last address, analysed by criterion

Length of stay	Successes		Failures		Total	
	No.	%	No.	%	No.	%
Since chichood	112	62	68	38	180	100
7 years or more	8 }	59	5 }	41	14 }	100
4–7	8 }		8 }		16 }	
1–4	22 }		14 }		36 }	
Less than 1 year	48	55	40	45	88	100
No information	127	33	259	67	386	100
Total	326	45	394	55	720	100

V.76 Religious background is difficult to define in any situation, in the present case perhaps more difficult than usual. We were, however, able to ascertain in respect of nearly all cases the denomination which was given by them on entry to the Borstal. In view of the findings of the Gluecks,[16] it seemed desirable to record and analyse this information even although its interpretation might be open to various objections. We may perhaps be justified in regarding these data as referring to "nominal" religious affiliation. It seems, as the Gluecks also remind, that less who professed the Roman Catholic faith were more often committed to Borstal, and that those who professed nonconformist faiths less often than the population at risk would suggest. It is estimated by various bodies (Mass Observation and the Gallup Poll) that there are between 5 and 10% of the population of this country who are nominally Roman Catholic, whilst between 11 and 12% may be classified as Nonconformists. The residual usually describe themselves as Church of England, except for about 5% who state that they have no religion. In the Borstal sample we found 143 cases out of a known 668 or 22% who described themselves as Roman Catholic (population at risk 10%) and 30 who described themselves as Nonconformists or 4½% (11% at risk). This finding is of interest mainly because of its indirect inferences with respect to our findings on broken homes. It seems that at least as many Borstal boys come from homes where the code of marriage is more stringent as come from homes where the code is legislated only by the civil law. The analysis of the successes and failures in our sample according to their nominal faith shows Nonconformists with a success rate of 53% and Roman Catholics with a success rate of 48%—there is no significant difference between these two classes in terms of nominal faith. Detailed figures are given below.

TABLE 29

Nominal religion, analysed according to criterion

Religion stated on official papers	Successes		Failures		Total	
	No.	%	No.	%	No.	%
Roman Catholic	65	45	78	55	143	100
Church of England	234	48	252	52	486	100
Nonconformist	16	53	14	47	30	100
Atheist	1	—	—	—	1	—
No information	10	18	47	82	57	100
Total	326	45	391	—	717*	391

* 3 non-Christian religions excluded.

V.77 It may be thought that our population comparisons and the Gluecks' findings both suggest a greater risk for adherents to the Roman Catholic faith, because the profession of this faith tends to characterize the poorer areas. Liverpool, for example, is known to have a high proportion of delinquents and also to have above average poor-class dwellings; it is also believed to have an above average Roman Catholic population. Analysis of the faith professed by the Borstal entrants by the rateable value of a head of the population shows no reason to believe that Roman Catholicism is a feature of the poorer *towns* and that Nonconformity is a feature of the middle classes. This analysis is given in Table 30 below:

TABLE 30

Religion professed by Borstal boys and the rateable value per head of the town of residence

Religion	Average rateable value £'s per head	Number† on which average was based		Total in sub-groups	
		No.	%	No.	%
Nonconformist	7·2	21	5	30	4
Church of England	6·8	311	71	486	67
None or non-Christian	7·0	2	—	4	1
Catholic	6·9	107	24	143	20
No information				57	8
Total	6·8	441	100	720	100

† Excluding London, rural and no information

V.78 There may be many complex factors interacting to give the results shown in this analysis by religious background, and the precise meaning cannot be determined. The results of our investigation are produced to afford comparison with earlier studies involving this factor, not because we feel that much of value is derived at this stage by such analyses.

FAMILY CRIMINAL RECORD

V.79 In 525 cases there was no trace of any other member of the family having been apprehended for crimes, whilst in 131 cases some record of other crime in the family was noted. In 64 cases the information could be obtained because the appropriate papers were missing, or the file was not traced. If we took an overall view of the data, omitting any consideration of the cases where no information could be traced, there was no significant association between the success rate of those with and those without a record of other crime in the family.

TABLE 31

Whether any record of crime in the family analysed according to criterion

Whether any record	Success		Failure		Total	
	No.	%	No.	%	No.	%
Some record	60	46	71	54	131	100
No trace of record	255	49	270	51	525	100
No information	11	17	53	83	64	100
Total	326	45	394	55	720	100

V.80 If we examine the data regarding family crime record in terms of the age at which the youth first commenced his career of crime we find that there was some slight association; those who began crime early having a slightly higher probability of coming from homes where other members had a criminal record.

TABLE 32

Age of first recorded crime, analysed according to family crime record

Age at first conviction	Family record		No family record		No information		Total	
	No.	%	No.	%	No.	%	No.	%
21	2		6				8	
20	1		11		1		18	
19		14	22	78	2	8	24	100
18	6		32		2		40	
17	10		50		2		69	
16	12		62		13		79	
15	12		64		6		89	
14	17	22	43	70	7	8	77	100
13	15		49		5		71	
12	16		50		13		71	
under 11	14	22	64	66	18	12	101	100
No information	2				14		14	
Total	131	18	525	78	64	9	720	100

V.81   There is thus some tendency for those who had been found guilty by a Court before the age of 14 to have been more likely to have come from homes where other members had a criminal record.

HOME CONDITIONS GENERALLY

V.82   It is unfortunate that we could not obtain more facts about the home conditions and that these data were not available for different periods in the crime careers of the sample.   How much the efficiency of the prediction equation might have been enhanced if we had been able to obtain better data in this respect cannot be guessed.   Perhaps there would be little gain in efficiency because we may have been able to use correlations with other factors which themselves reflect these (perhaps) more basic data.   In the present case, and within the limitations of our terms of reference, the loss of these data does not perhaps represent a great disadvantage.   If we had these other data, and they were nearer to being the root "causes", then the other factors which we have used and which derive from the same root "causes" would drop in efficiency as predictors.   If, for example, we were to include "drunkenness of parent" as a factor, and there was a complete correlation between parental drunkenness and drunkenness of the individual (this is highly improbable but will serve to show our meaning), then our factor of drunkenness in the individual would have no weight in our analysis since its predictive function would be taken over by the parental factor.   In this hypothetical case there would be no gain in the efficiency of prediction by including both the parental factor and the individual factor—the two together explain no more of the variance than one alone.   Similarly, where the correlation between factors which we have used and those where we have been able to get information is high but imperfect, there is little chance of any real gain in efficiency of the prediction instrument.   No gain in efficiency is afforded *merely* because the factors used are nearer to "causes" than others.

V.83   The only other data which we were able to obtain regarding home conditions was the subjective judgment of the home visitor, police or probation officer.   We regard these as of little validity for our purposes.   Our reason for this was that different assessors might look for different things.   Some might be impressed by the cleanliness of the home, others by comparative wealth of possessions, others by accommodation standards or even the church-going habits of the parents, whilst others might attempt to assess the tensions or goodwill within the family circle.   None of the assessors stated upon what grounds they made their assessments in sufficient detail for facts to be abstracted.   Since we seek to throw light upon an individual by comparisons with other individuals, and not by reference to each individual alone, we need facts which can be compared and *added together* to a large number of cases.   These sorts of data could be obtained from the visitors' reports only by taking an overall view of the material, which in turn demanded the interpolation of a further stage for interpretation.   It will be recalled that we have discussed the Governors' and Housemasters' assessment in such a form.   We give below the data resulting from a similar overall judgment of the visitor's reports of home conditions.

TABLE 33

Assessment of home conditions, analysed according to criterion

Assessment	Successes		Failures		Total	
	No.	%	No.	%	No.	%
Good	120	57	90	43	210	100
Fair	87	43	117	57	204	100
Bad	83	46	97	54	180	100
No information	36	29	90	71	126	100
Total	326	45	394	55	720	100

V.84   It will be seen that the only class which discriminated between suc-
cesses and failures was that rated as " good ".   There was no significant
difference between the success rates of those classes of homes which were
classed as " fair " and those frankly rated as " bad ".   This may mean that the
visitors were inclined to be a little too guarded in their comments, being in-
clined to give a rating of " fair " where conditions might reasonably have been
stated to be " bad ".   If there was no difference between " fair " and " bad " it
does not seem likely that any finer gradings of home conditions would have
been useful.   It would, perhaps, be more valuable if instead of an overall
narrative report of home conditions, visitors were required to report on
separate factors—using a three-point scale of assessment if objective standards
cannot be laid down.   For example, factual data should include:

Number of rooms in house.
Number of persons in the family.
Number of persons in household.
Number of siblings born and living.
Number of siblings in household.
Whether house, part house, self-contained, tenement, etc.
Whether both natural parents living at address and if not what are the
      circumstances—working away from home, father in Forces, divorced,
      separated, etc.
Number of wage-earners in household.
Whether mother working full time, part time or not.
Who is responsible for domestic catering.
Occupation of father and some indication of the income of the household
      . . . etc.

Rating data might cover such things as, for example:

Relationship mother/lad.
Relationship father/lad.
Relationship with siblings.
Relationship mother/father.
Cleanliness of dwelling.
Material comfort of house.
Parents attitude to lad's crime.
Estimates of nature of home discipline . . . etc.

V.85 At present very few cases can be obtained for any one case from completely unsatisfactory reports. The systematising of the report form should itself help in making the reports more valuable. It would make interpretation easier and more certain.

V.86 The requirement to discipline themselves into looking for specific facts should not hinder visitors in their reporting of factors which do not appear on the prompted list of items which they must consider in every case. There is no reason why, in addition to assessing details, they should not continue as at present to make an overall judgment. In fact, the value of the overall summary would be enhanced by the detail.

V.87 It is possible to look at the categories of home which the visitors tended, on average, to rank above or below the normal by weighting Good as 3, Fair as 2, Bad as 1 and calculating averages. These data are given below:

TABLE 34

Type of household of Borstal boys,
analysed by average assessment of home conditions—"Good"
a weight of 3, "Fair" a weight of 2 and "Bad" 1

Living at/with/home conditions	Average assessment of home conditions	Number as base*	Total in each sub-group	
			No.	%
Father and mother alive and living with	2·425	33	34	5
Father, mother and siblings	2·178	202	209	29
Father, stepmother	1·941	17	17	2
Mother, stepfather	2·071	28	29	4
Mother only, no father	1·903	93	95	13
Father only, no mother	1·931	29	30	4
Institution or H.M. Forces	1·944	54	65	9
Lodgings, relations or inlaws	2·077	65	79	11
No fixed abode	—	—	66	9
No information	—	—	83	12
Others	1·700	10	13	2
Total	2·051	531	720	100

* Total excluding No Information and Does Not Apply.

V.88. In this table we retain the order previously used on similar analyses so that comparisons may be readily made. It is informative, perhaps, to rank the types of home according to the mean assessment of the visitors.

Father, mother and one child	2·42
Father, mother and siblings	2·17
Lodgings/relations or in-laws.	2·08
Mother and stepfather .	2·07
Institution or Forces	1·94
Father and stepmother.	1·94
Father, no mother	1·93
Mother, no father	1·90
Others	1·70

V.89   It seems that "broken homes" are rated on average below unbroken homes, and indeed it seems lower than no home at all.   This conflicts with the findings shown, for example, in Table 26, when we noted that broken homes were as good an indicator of success as normal homes and that it was only the complete lack of home ties that detracted from resettlement chances.   Thus the assessors seem to tend to assess with respect to factors known to be prognostic of delinquency (broken homes are prognostic of delinquency—see, for example, Table 25) but not necessarily with respect to factors prognostic of success or failure *after* delinquency.   In many cases the same factor may be prognostic of both outcomes, but in this particular case there is no evidence that this applies to the factor of "broken homes."   Another example of a factor being associated with the former but not the latter was that of religious professions already discussed.

THE HOME AREA

V.90   Little is known of the area of residence of Borstal boys.   We have already examined the relationship between the age of their first recorded crime and various characteristics of the town in which they were living at the time of the crime for which they were committed to Borstal.   The majority of our comment then made applies to considerations of the same data related to the incidence of success or failure.   Only one factor showed any possibility of association with success and failure—namely the industrialisation index.   Towns which had a very low ratio of industrial to other property showed slightly better success rates, but this did not reach significance levels.

V.91   Since we have already given tables showing the town factors analysed in terms of the age of entry into crime, it seems that we should reproduce here further tables of these factors even though they do not show any significant association with our criterion.   They possess no merits of their own, except to afford a basis for further work or for comparison with previous research.

V.92   Table 35 here records the data analysed by town side; London, accounting for so large a proportion of the total, is shown separately.

TABLE 35

Size of town in which the Borstal boy was resident at time of Borstal crime, analysed by criterion

Population of town	Success		Failure		Total	
	No.	%	No.	%	No.	%
Under 10,000	29 }		32 }		61 }	
10,000–19,999	20 } 58	47	20 } 65	53	40 } 123	100
20,000–29,999	9 }		13 }		22 }	
30,000–39,999	7 }		7 }		14 }	
40,000–99,999	30 } 190	50	33 } 191	50	112 } 381	100
100,000+	124 }		137 }		255 }	
London	65	44	83	56	147	100
No information	13	19	56	81	69	100
Total	226	45	294	55	720	100

Grouped χ^2=1·520 for 2 degrees of freedom
P between 0·50 and 0·30

V.93 Table 36 shows the average rateable value a head of the population of the town in which the lad was resident at the time of the crime for which he was committed to Borstal. The rateable value a head is, as we have noted earlier, correlated with the wealth of the town.

TABLE 36

Rateable value a head of the town in which the Borstal boys were resident at the time of the Borstal crime, analysed by criterion

Rateable value	Success		Failure		Total	
	No.	%	No.	%	No.	%
£2	1				1	
£4	4 }45	52	6 }42		10 }87	100
£5	17		22		31	
£8	23		60		113	
£6	33		32		113	
£8	28		178 }178	50	354 }354	100
£28	66 }176	50	17		120	
£9	15		15		33	
£10+	14				29	
London	65	44	82	56	147	100
Rural	27	42	37	58	64	100
No information	13	18	55	81	68	100
Total	326	45	394	55	720	100

Grouped $\chi^2 = 2.235$ for 3 degrees of freedom
P between 0·70 and 0·90

V.94 In this table both London and rural districts have been treated separately. This is because the basis of rating valuation for London and rural areas differed. It is interesting in passing to note that, although about 20% of the population of England live in rural areas, rather less than 10% of the Borstal sample were living in rural areas at the time of their crime. This may be because rural youths who commit crime gravitate towards the towns where they are not likely to be known, or it may be that crime (which leads to Borstal) is less prevalent in rural areas. If the latter is true, then this is another example of a factor which helps to discriminate the delinquent from the non-delinquent, but not between delinquent's successes and failures after treatment in Borstal.

V.95 In the future it may be possible to study ecological factors in more detail. The "J-index",[3] to which we have referred, might help, as also might the Census Social Class Classification.[49] Ecological factors in the human field are seldom simple factors—poor people live in poor areas and poverty is associated with many factors. If ecological factors are studied they should not be studied in isolation any more than should any other class of data.

SCHOOL LIFE AND ABILITY

V.96 In common with most workers in this field we found that there was an association between truancy and failure, but there seemed to be no association between educational standard reached and our criterion. School reports,

which now form a standard part of every Borstal File, were not available in more than half of the files studied, and amongst those who had no school report the failure rate was much higher. The absence of data in this case may mean that the degree of association found is smaller than that which would have been seen in the event of it being available in all cases, but no other bias seems likely.

V.97 School reports, like visitors' reports of home conditions, were in large measure unguided and unsystematic. No specific questions were asked about truancy, and we could note this factor only if it were recorded. Whether or not the factor was recorded may be correlated with the incidence of truancy, but it seems likely that in many cases the report writers did not consider this item worth mentioning. In these cases we have had to assume that truancy was not a feature of the school life of the boy. This is a very dubious assumption. Truancy has been shown by so many writers to be associated with crime that it seems worth while to seek in future some objective information about school absences.

We give the data available below.

TABLE 37

*Information available from school reports,
analysed according to criterion*

		Successes		Failures		Total	
		No.	%	No.	%	No.	%
Good	no reference to truancy	29	62	14	38	43	100
Fair		44		29		64	
Poor		26		27		53	
Good	evidence of truancy	1	55	1	45	2	100
Fair		15		9		24	
Poor		18		18		36	
No information		191	39	305	61	496	100
Total		326	45	394	55	720	100

TABLE 38

Educational standard analysed by the criterion

Educational standard	Success		Failure		Total	
	No.	%	No.	%	No.	%
Good	6	60	3	40	9	100
Fair	13		13		31	
Bad	14		9		23	
No information	288	44	369	56	657	100
Total	326	45	394	55	720	100

7

INTELLIGENCE

V.98 On entry to Borstal each youth is submitted to the Columbian test of general intelligence. The analysis of the data is given below.

TABLE 39

Columbian test score, analysed according to criterion

Score	Successes		Failures		Total	
	No.	%	No.	%	No.	%
Over 90	18 }	50	15 }	50	33 }	100
80–89	51 }		51 }		105 }	
70–79	64 }	47	65 }	53	129 }	100
60–69	61 }		74 }		135 }	
50–59	41 }	47	46 }	53	87 }	100
40–49	29 }		34 }		63 }	
30–39	21 }	48	20 }	52	41 }	100
20–29	8 }		12 }		20 }	
10–19	7 }	50	5 }	50	12 }	100
Under 10	14 }		16 }		30 }	
No information	12	18	53	82	65	100
Total	326	45	394	55	720	100

Grouped $\chi^2 = 2.59$ for 1 degree of freedom
P between 0·20 and 0·10

V.99 There is clearly no significant association between intelligence level as measured by the Columbian test system and success rate. The Gluecks found some association (0·14) with a hybrid system of classification which they referred to as intelligence, and it accordingly seems that such association as they found was due, if significant, to the factors which were confounded with those of intelligence. On the other hand it may be suggested that the more intelligent may manage to avoid arrest for some time, and that our short follow-up period may give rise to some bias in this respect. Any correction along these lines would reverse (and not only nullify) the conclusion of the Gluecks, and we should have to suppose that the more intelligent did not do so well after release from Borstal as the average or dull.

V.100 We can follow the suggestion which we have made earlier of assuming that the number of crimes taken into account was an estimator of undetected crime, and that those who managed to avoid arrest for some time before Borstal committal might similarly be likely to avoid arrest for some time after release. Analysis of the number of crimes taken into account at the time of the Borstal sentence did show a correlation with intelligence—the dull being more likely to ask for fewer crimes to be considered.

V.101 It seems that if we exclude the few who were very much above the average intelligence (for Borstal boys) and those who were very much below, there is little association between crimes taken into account and intelligence. The numbers are too small to have any statistical significance, but it is interesting to note that the *suggestion* of curvilinear association of success with intelligence vanishes if we modify the results in terms of the possible effect of undetected crimes upon the criterion. There was, however, no *significant difference*

between success rates in the different intelligence groups, either unmodified or modified by this consideration.

TABLE 40

Columbian test score, analysed according to the number of crimes taken into account at time of Borstal committal

Test score	Number in group	%	Average number of crimes taken into account
90–99	33	4·6	4·1
80–89	105	14·6	3·4
70–79	129	17·9	3·1
60–69	135	18·7	3·1
50–59	87	12·1	3·2
40–49	63	8·8	3·1
30–39	41	5·7	2·4
under 30	62	8·6	2·7
No information	65	9·0	—
Total	720	100·0	

WORK AND LEISURE

(a) Work

V.102 , The classification of work record and types of employment was attempted in various ways since we considered that in these types of data we should find our best material for prognosis. Whilst these kinds of data do afford the best prognosis for any single type of data the basic data from which we had to abstract our requirements were poor, and considerable difficulties were experienced in handling and classifying. In this experience we were not alone. It will be remembered that the Gluecks lost nearly half (48%) of their 500 Criminal Careers when they assessed them with respect to "work habits". Indeed, we were somewhat more fortunate in losing only 22% to one of our systems of classification.

V.103 For reasons which we have gone into in more detail earlier, we were not prepared to rate "work habits" or "job record". We sought reproducible objective systems of classifications which were entirely independent of our skill (or lack of skill) as assessors. Classifications based on the type of work were not found to be very useful. We did not consider that the Borstal boys had opportunities of obtaining the better types of employment because of their previous criminal career. Their crime record, beginning quite often before they finished full-time schooling, would have interacted with types of employment. The vast majority came from unskilled and labouring work, and the same technical difficulty as was discussed under the analyses of types of crime again obtruded.

V.104 Because of these and other considerations, when we need not go into in detail, we adopted two systems of classifying previous job record (i.e. prior to Borstal training). These were:

    (a) average duration of job.
    (b) longest period in any one job.

V.105 For our first analyses we worked fully on both systems, and subsequently judged a) from the prediction equations. Some of the reasons

for this we shall discuss when dealing with general principles and some further reasons we shall give here.

V.106 The basic data are given as Tables 41 and 42 below.

TABLE 41

Average duration of jobs, analysed by the criterion

Average duration of jobs	Success No.	Success %	Failure No.	Failure %	Total No.	Total %
10+ months	78		38		111	
9 „	13 } 108	62	} 65	38	} 171	100
8 „	20		18		38	
7 „	11		23		23	
6 „	27 } 92	57	12 } 70	43	39 } 182	100
5 „	24		29		53	
4 „	30		35		47	
3 „	22		22		44	
2 „	11 } 41	41	22 } 60	59	20 } 101	100
1 month	8		12			
No employment since school	7				14	
No information	80	29	192	71	272	100
Total	326		394		720	100

Grouped $\chi^2 = 12 \cdot 68$ for 2 degrees of freedom
P less than 1% level
$r\phi = \cdot 222$

TABLE 42

Longest period in any one job, analysed by the criterion

Longest period in any one job	Success No.	Success %	Failure No.	Failure %	Total No.	Total %
More than 18 months	96		85		161	
1 year to 18 months	34 } 182	59	47 } 112	41	81 } 274	100
9 months to 1 year	52		65		118	
6–9 months	18 } 108		80 } 128	54	98 } 234	100
4–6 „	16		40		61	
3–4 „	1		5		11	
2–3 „	2 } 13	28	14 } 35	72	21 } 48	100
6–8 weeks	7		8		7	
4–6 „			5		8	
Under 1 month	4		8		10	
No employment since left school	4					
No information	89		119		158	100
Total	328	45	394	55	720	100

Grouped $\chi^2 = 10 \cdot 71$ for 2 degrees of freedom
P less than 1% level
$r\phi = \cdot 255$

V.107 It will be seen that we could not establish the average duration of
jobs in more than 74% of the cases, and that we lost 22% of our cases in the
attempt to classify according to the longest period in any one job. In these
latter cases this was almost always because no work history sheet appeared
in the files. This deficiency was largely due to the aftermath of the dis-
organisation of the Borstal system during the 1939–45 war. Nevertheless, it
seems to be difficult to get information of high quality about the work record
of criminals. This may be due to the fact that too much is attempted. The
work record of criminals falls into a different category altogether from that of
other men, and this means that it is generally impossible to obtain an
accurate and detailed statement. It appears that it would be worth while to
give much consideration to this problem; to study what sort of information
can be obtained and how reliable it is. It may be that a few (say three or
four) items of information relating to work history, if accurately obtained and
recorded, would achieve the same or better results than the all-too-often
abortive attempts to build up a complete picture. That time devoted to this
would be well spent is suggested by most of the criminological studies to
which we have referred. The Gluecks, for example, found in "work habits"
(a subjective assessment) a zero order correlation with their criterion of +0·48.
This was, by a considerable margin, the largest zero order figure they found in
their preformatory factors. Although our zero order correlation for both
the "average" and the "longest period" fall well below this, the correlations
were still the highest amongst our pre-Borstal factors taken singly.

V.108 Clearly there is a high correlation between the longest period in any
one job and the average for all jobs including the longest. Both factors were
examined only in order that one might eventually be used. We wished first
to find out which was the better. There were, of course, other considerations
than the value of the zero order correlation to be taken into account. Opera-
tionally we would prefer the simpler of any two systems, and we also prefer
the more prognostic and the more reliable data. In this case our requirements
were not as conflicting as they might have been. We were most influenced
by the fact that for the "average" we lost 272 cases whilst for the "longest
period" system we lost only 158. Next, since in calculating the average we
had to assume that all jobs, even of the shortest duration were noted, we felt
that whilst the average would be preferable in that it contained more informa-
tion, it was not necessarily preferable if some of this extra information were
wrong. We could not estimate the likely error. It seemed probable that if
jobs were omitted from the record the most likely omissions were those of
short duration, and thus we might have lost important numbers from our
divisors of time. In short, we felt more inclined to rely upon the simpler
measure of job record than on any composite measure which presumed com-
pleteness of recording, and we thought that the job most likely to be recorded
(if any were recorded at all) was that of longest duration.

(b) Leisure

V.109 Well over half the cases were lost when we attempted to obtain data
relating to leisure activities. No systematic attempts had been made to
obtain information and the sources of data where these were available were
varied. In some cases the police report included this item and in others the
visitors' report. In some cases the item were clearly reported as being derived
from a parent, for example, "His mother says . . ." The intonation, which

in the spoken evidence would it be clear whether this was or was not expected to be taken seriously, was not indicated on the written report! No exclamation marks were noted, but instructions were to coders that they were to omit any comments thus punctuated.

V.110   In general, it seems that any leisure activity was better prognosis than none at all.   The data, which are of little value, however, are shown.

TABLE 43

Types of leisure activity, analysed by criterion

Types of activity	Success		Failure		Total	
	No.	%	No.	%	No.	%
None specifically stated	10	42	14	58	24	100
Looking after animals	4		2		6	
Constructive hobbies/collecting	9		3		12	
Reading/study/night classes, etc.	8	30	64	2	17	36	4	47	16	100
Club, organised group activities	9		7		16	
Sports playing	8		3		11	
Sports watching						
Cinema going	37	54	31	40	68	100
Other	51	64	51	36	141	100
No information	159	36	281	64	440	100
Total	226	45	394	55	720	100

V.111   In this respect, as in that above, it is felt to be particularly unfortunate that more data were not available.   Types of leisure pursuits amongst "normal" adolescents show very interesting patterns that suggest that this class of data would be valuable.   A chart showing these patterns, together with three items regarding employment, is reproduced from "The Employment of Adolescents" (an unpublished Social Survey report)[7] (Chart I, page 103).

PART IV

MEDICAL AND PSYCHOLOGICAL FACTORS

V.112   Neither medical nor psychological reports were often available, and for this reason these data have been relegated to the end of this subsection, although under other circumstances they would have been presented and studied earlier.   A study of the data where available revealed nothing of real value in this study.   The psychologist's prognosis seems, however, to have some promise, whilst the medical data are of interest in that the results are negative.

V.113   The medical data were reduced to the simple dichotomy of some defect and no observable defect.   There was no significant association between this classification and our criterion, although even from our case history material such an unexpected.   Table 44 shows the analysis.

Chart I

Showing a pattern of factors in work and leisure as found in a general population sample of adolescent males

Have had three or more jobs

Not satisfied with first job

Not satisfied with current job

Frequently at a loose end

Not very happy at school

Go very often to the cinema

Do not belong to clubs etc.

Did no reading in month before interview

■ Diagonal cells   ▨ High association   ▨ Association   ▨ Possible association   □ No significant association

V.114 Psychologists' reports were available in 82 cases and a prognosis was identified in 65 of these. Perhaps the insignificant association between the

TABLE 44

State of general health from medical record, analysed by the criterion

Physical grades	Success		Failure		Total	
	No.	%	No.	%	No.	%
Some physical defects	63	60	42	40	105	100
No physical defects	167	58	119	42	286	100
No information	96	29	233	71	329	100
Total	326	45	394	55	720	100

psychologists' assessment of personality and the criterion is due to the small sample, but the difference between the success rates when analysed by this assessment is small in absolute terms as well as insignificant statistically. Whilst we would doubtless be unjustified in assuming that this had any "personality factors" have little relationship with success or failure, it seems that the association is less than some have claimed. Our own results throw some light on this problem as a by-product of the prediction tables construction. (See Chapter VI.)

TABLE 45
Psychologist's assessment of personality, analysed by the criterion

Assessment	Success		Failure		Total	
	No.	%	No.	%	No.	%
Very good	9 }		4 }		13 } 46	
Good	23 } 32		10 } 14		33 }	
Fair	16 } 21	58	13 } 15	42	29 } 36	100
Poor	5 }		2 }		7 }	
No information	273	43	365	57	638	100
Total	**326**	**45**	**394**	**55**	**720**	**100**

P_{χ}^2 lies between 20% and 30%.

V.115   When psychologists were assessing the likely chance of failure—more often expressed as the likely result of Borstal training or whether the lad would pass through the system unmodified in his behaviour or moral pattern—more success attended their assessments. Although only 65 cases were available the association between prognosis and the outcome as observed in this study was significant at the 1% level. The r_{ϕ} correlation coefficient of 0·86 was obtained and represents the highest value noted for subjective assessments in this project; higher indeed than any single factor whether "objective" or subjective, but not significantly higher than that with work record. The small numbers give this coefficient a wide range of error, but the result is encouraging, particularly if in later research it is found that this assessment covers different ground from that otherwise covered by other factors.

TABLE 46
Psychologist's prognosis, analysed by the criterion

Psychologist's prognosis	Success		Failure		Total	
	No.	%	No.	%	No.	%
Very good	2 }		2 }		2 }	
Good	4 } 30	72	2 } 11		4 } 41	100
Fair	24 }		7 }		24 }	
Poor	10 }		10 }		20 }	
Bad	1 } 11	46	8 } 13	54	9 } 24	100
No information	285	44	370	56	655	100
Total	**326**	**45**	**394**	**55**	**720**	**100**

P_{χ}^2 less than 1%.
r_{ϕ} 0·86

V.116 Perhaps the most interesting fact in the above table is that the success rate, even of those where the psychologist gave the worst prognosis, was above the average. This cannot very well mean that the interview is itself therapeutic, but is more likely to arise from the procedure of referral to the psychologist.

A NOTE ON TABLES 41–46

V.117 Perhaps it should again be said that the period chosen for the collection of the basic data for this study was too soon after the war for the Borstal system to have become as highly organised as it would have been under normal conditions. The records which we were unable to trace and the data we would have liked to have found but which were not available are, in general, now available.

PART V

BORSTAL TRAINING

RECOMMENDATIONS OF THE COMMISSIONERS

V.118 In all cases where lads are before the Courts and are being considered for a Borstal sentence, the Prison Commissioners have an opportunity of stating whether, in their view, Borstal is or is not a recommended form of treatment. (Criminal Justice Act, 1948, Section 20 (7), or, for the time before 1948, the Prevention of Crime Act, 1908, Section 1). The Courts are in no way bound by this recommendation. About a quarter of the lads in the present sample who were eventually sent to Borstal by the Courts were not, in fact, recommended for this form of treatment by the Commissioners. This was the position in 1946–7 when the sample was drawn and may not apply today. In 61 cases in the sample we were not able to trace any information regarding the Commissioners' recommendation, but 153 cases were sent to Borstal notwithstanding the Commissioners' recommendation to the contrary; in 506 cases treatment was in accord with the recommendation. We show below the success and failure rates analysed according to the Commissioners' recommendation.

TABLE 47

Whether recommended for Borstal training by the Prison Commissioners, analysed according to criterion

Recommendation	Successes		Failures		Total	
	No.	%	No.	%	No.	%
Recommended	246	49	260	51	506	100
Not recommended	70	46	88	54	153	100
No information	10	16	51	84	61	100
Total	326	45	394	55	720	100

V.119 The success rate amongst those who were recommended for Borstal training was 49% and amongst those who were sent to Borstal against the

recommendations of the Commissioners was 46%. There is no statistically significant difference between these two classes. This may be due to the fact that reasons for not recommending to Borstal may not be homogeneous.

V.120   As Sir Lionel Fox in "The English Prison and Borstal Systems" [9] reports, "suitability" connotes (p. 800) that both the offender is in need of prolonged training and he is likely to profit by it (see also p. 359). In the case of *Rex v. Murray* (16th October, 1950) the Court of Appeal said: "Because the Prison Commissioners report that a man is suitable for corrective training or preventive detention, this is not in itself a reason why the Court should pass such a sentence, but if they report that he is not suitable for corrective training, it is a very strong thing to disregard their opinion." In the case of recommendation for Borstal training, physical factors appear to be given considerable weight. There is no reason to expect the recommendations of the Prison Commissioners to be associated with the criterion. The Commissioners do not recommend Borstal as the "most suitable" treatment, but state only that Borstal is "suitable". Thus a lad may be "suitable" for various forms of treatment and none of them be more likely to lead to success than any other. How different treatments compare with each other in terms of the likelihood of a "successful" outcome is not yet known, and "suitability" involves many other factors of administration than this. For a fuller discussion of this and related problems see Chapter IX.

V.121   The Commissioners' recommendations differed significantly with the age group of the offender, in that those between the ages of 18 and 19 being recommended than was the average for other age groups. The analysis of the Commissioners' recommendations by age is shown below.

TABLE 48

Whether recommended for Borstal training by Prison Commissioners,
analysed by age at committal

Age at committal	Recommended		Not recommended		No information		Total	
	No.	%	No.	%	No.	%	No.	%
22 years	7	71	8	24	1		16	100
21 „	34		7		2		42	100
20 „	56	74	14	18	6	8	76	100
19 „	91	80	14	12	9	8	114	100
18 „	95	75	20	16	11	9	126	100
17 „	154	69	54	24	16	7	224	100
16 „	62	56	34	30	16	14	112	100
Total	499	70	150	21	61	9	710	100

V.122   There seems to be some suggestion that the Courts' action differed from the Commissioners' recommendation mainly in the committing of *offenders* of 16 years of age to Borstal, and less markedly in committing those over 20 years of age.

V.123   The Courts also differed from the Commissioners' recommended treatment in that they seemed to pay less regard to the age at which the lad entered upon his criminal career. The Commissioners seem to have recom-

mended somewhat less frequently those who began their career of crime between 12 and 15. In this respect there is some association between the chances of the lad being successful and the recommendation as we have seen in earlier sections. Analyses of the age of first Court appearance and the Commissioners' recommendation are given below.

TABLE 49

Whether recommended for Borstal training, analysed by age at first conviction

Age at first conviction	Recommended		Not recommended		No Information		Total	
	No.	%	No.	%	No.	%	No.	%
20–21	15		5		1		21	
19	21		1		2		24	
18	30	76	9	19	2	5	40	100
17	49		11		2		62	
16	55		13		2		70	
15	58		23		8		89	
14	52	67	14	23	11	10	77	100
13	51		15		5		71	
12	51		11		9		71	
11	48	69	17	20	6	11	71	100
under 11	70		18		13		101	
No information	11		3		—		14	
Total	506	71	153	21	61	8	720	100

V.124 Unfortunately, the numbers in each separate age group were too small to enable us to say whether there was any difference between individual years, or whether the difference between the 20% not recommended in the group who began their criminal career before 12 years of age differed from the 19% who did not begin until over 16 years of age. The apparent difference between the groups in the column headed "Recommended" may only be due to the changing values in the "No information" columns. This is an example of the way in which lack of information may affect our results. We note that the proportion of cases unknown increased as the age at which the youth entered upon his career of crime decreased. This may mask any association there may be between the Commissioners' recommendations and this factor. If we assume that the "No information" category were distributed at random between the two classes with probability proportional to the numbers in those classes, we derive the figures for the proportion recommended in each of the three age groupings, 79%, 73%, and 77%. This slight tendency for the Commissioners' recommendations to drop for the centre group is interesting, but it may not be a real or significant factor.

V.125 The Commissioners' recommendations were considered in relation with the time which the youth was detained in Borstal training. There was no significant difference between the duration of training and whether or not the lad was recommended for such treatment. The basic data are given below.

TABLE 50

*Whether recommended for Borstal training by the Commissioners,
analysed by the time detained in Borstal training*

Time in Borstal (months)	Recommended		Not recommended		No information		Total	
	No.	%	No.	%	No.	%	No.	%
22 or more	116	76	36	24	—	—	152	100
18–21	134	76	42	24	—	—	176	100
15–17	142	80	35	20	—	—	177	100
Up to 14	114	74	40	26	—	—	154	100
No information	—	—	—	—	61	—	61	100
Total	506	71	153	21	61	8	720	100

V.126   It would be possible to carry out some five or six thousand tabulations of different kinds on the basis of the data of this survey, and there are some different analyses possible against which we could examine the factor of the Prison Commissioners' recommendations.   It would be uneconomic to make anywhere near all the possible comparisons.   Perhaps the selection of items against which we have studied the recommendations are an unrepresentative sample, and perhaps if we were to study more and different analyses we might find factors with which this is correlated.   It may be unsafe to generalise about the recommendations on the basis of the analyses so far made, but, pending further hypotheses, there is one further analysis which we propose at the moment to isolate.   In this we examine the association between the lads' institutional background and the Commissioners' recommendations.

TABLE 51

*Whether recommended for Borstal training by the Prison Commissioners,
analysed by whether the youths had had institutional experience*

Whether in an institution	Recommended		Not recommended		No information		Total	
	No.	%	No.	%	No.	%	No.	%
Institutional record	84	68	40	32	—	—	124	100
No record	409	79	109	21	—	—	518	100
No information	13	17	4	5	61	78	78	100
Total	506	71	153	21	61	8	720	100

V.127   There is thus some suggestion that the Commissioners do not recommend so frequently those who have had some institutional experience (other than Approved School).

ALLOCATIONS

V.128   When a Borstal sentence has been imposed, the lads proceed to a Reception Centre, where they are observed for a period of up to three months,

and then allocated to the type of Borstal which it is considered will be most likely to have beneficial results.

V.129   In the previous section we found, perhaps rather disappointingly, that there was no significant association between the success rates for those who were and those who were not recommended for Borstal training.   We find, however, a most striking difference between the success rates for the different Borstal Institutions to which the lads are sent.   The success rate for the best Borstal is more than twice that of the worst, excluding the recall centre Borstal at Portsmouth.   If we divide the Borstals into two types, the "open" and the "closed", we find also a most substantial difference in the success rate.   The "open" Borstals taken together had a success rate of 58%, whilst the "closed" Borstals taken together had a success rate of only 36%.

TABLE 52

Borstal to which allocated, analysed by criterion

Borstal		Successes		Failures		Total	
		No.	%	No.	%	No.	%
Open	Hewell Grange	18 }		8 }		18 }	
	Gringley	5 }	70	27 }	30	7 }	100
	Hollesley Bay	54 }				81 }	
	Huntercombe	29 }		15 }		44 }	
	Lowdham Grange	40 }	60	29 }	40	69 }	100
	Gaynes Hall	21 }		17 }		38 }	
	North Sea Camp	20 }		28 }		43 }	
	Usk	20 }	43	32 }	57	53 }	100
	All "open"	205	58	146	42	353	100
Closed	Feltham	23 }		25 }		48 }	
	Camp Hill	22 }	45	42 }	55	74 }	
	Portland	22 }		51 }		67 }	100
	Borstal	18 }	30	43 }	70	61 }	
	Nottingham	16 }		43 }		59 }	
	All "closed"	111	36	198	64	309	100
	No information	10	17	48	83	58	100
	Total	326	45	394	55	720	100

V.130   The first group of institutions in the above table may be roughly classified as "open" Borstals, whilst the second part of the table includes the "closed" institutions.   Within each class, the individual institutions have been put into the order of the success rate.   Little here can be said about the success rate for any particular institution, since there will be large chance variations between institutions and a success rate of 70% may vary between 55 and 85% due to the chance fluctuations of sampling if we regard our sample as a sample in time and not a sample of one in three of the intake.   There is no doubt, however, that there are considerable and significant differences between institutions, and that there is an important and highly significant difference between the success rate of the "open" and "closed" Borstals.

V.181 Since in a sample this size there is likely to be some considerable variation due to chance factors alone, it is interesting to compare the sample figures with those derived from the November 1952 report of the Prison Commissioners (for the year 1951)[10]. Taking the years 1945-9, or the dates given in Table 58 below, and collecting together the "open" and "closed" Borstals as shown in our Table 52, we find that the figures from the population (viz. 58% and 36%) are exactly the same as that derived from our sample. Similarly collecting the figures from the totals for the years stated and arranging them as in our Table 52 above, we derive Table 53.

TABLE 53
A comparison of sample with total figures of success and failure

Borstal		Number discharged	Not reconvicted	% not reconvicted	Sample % from Table 52
Howell Grange		156	120		
Gringley	(1947-9)	(?)	?		
Hollesley Bay		1009	649	63	70
Huntercombe		237	162		
Lowdham Grange	(1946-9)	906	455	56	60
Gaynes Hall		179	114		
North Sea Camp		334	217		
Usk	(1947-9)	727	408	57	48
All "open"		**3808**	**2232**	**59**	**58**
Feltham		700	309		
Camp Hill		443	207	45	48
Portland		1223	395		
Borstal		989	598	52	30
Nottingham		927	344		
All "closed"		**4382**	**1563**	**36**	**36**

Source—Report of the Prison Commission 1951

V.182 The comparison between the sample and the totals is not completely valid since the dates vary slightly and we had a proportion of unknown cases. The most interesting point brought out by the more reliable figures derived from the large numbers is that whilst we found the "open" success rate "shaded into" the success rate for the "closed" institutions, the totals show a fairly clear break.

V.183 Are we then to assume that the Open Borstal system represents a better form of treatment than the "closed"? This is almost certainly the case, but unfortunately there are two meanings which may be attached to the table and which the present study does not enable us to separate very satisfactorily. We may assume either that (a) the "open" Borstals are a far better form of treatment resulting in nearly twice the success rate of the "closed", or that (b) the work of the Reception Centres is so extremely efficiently carried out that they are able to send the best cases to the "open" institutions with astonishing precision. Either conclusion is most gratifying. This finding applies only to the broad category of alloc..ion

("open"–"closed") and nothing is known about the effectiveness of allocation procedures within these categories, i.e. between individual institutions. The magnitude of the difference between the "open" and "closed" Borstals is such that it seems that we must conclude that "open" Borstals have a greater reforming influence upon the lads in their charge even after making reasonable allowances for the better material upon which they have to work, but we shall examine this assumption.

V.134 It is in the assessment of what may be regarded as "reasonable allowance" for the "class of material" upon which different treatments operate that the prediction system may be of operational utility. We have accordingly taken the problem of the efficacy of "open" and "closed" forms of treatment as a test case example. We may assume that by using the prediction table based on experience available before committal we have a system of classification for risk of failure. If then we classify the youths according to this system without regard to the form of treatment they are to receive, we are forming an assessment of the type of lad upon whom the reforming influence of either "open" or "closed" institutional systems will be operating. Thus if we find that lads in the 20% risk of failure group emerge from closed Borstals with 30% risk of failure and from open Borstals with 10% risk, we can assume that a real difference exists between the reforming influence of the two systems which is not accounted for by the type of risk sent to the different treatments. A statistical procedure* known as the "Analysis of Variance" will test whether the differences are such that they could occur by chance and will also tell us whether there is a significant difference between the material and the treatment of it by the systems. The type of "material" is not, of course, completely specified by the equation, but it is an independent and repeatable system of classification. It is verified with reference to the same data as that to which it is being applied and thus forms a system for splitting the groups or sub-groups about their mean, as indicated by our example above where the 20% failure risk group represents the "open-plus-closed" calculated risk. We show first the results of the analyses of variance and, after some discussion of these, present a simpler example for those who may be unfamiliar with this technique. The resulting analysis is shown below.

TABLE 54

Type of Borstal and criterion, using failure score as estimate of the material upon which the treatments operate

	Degrees of freedom	Mean Square (Score)
Type of Borstal	1	1869·5
Criterion (due to "allocation")	1	4155·8
Residual (Error)	1	369·0
Total sum of squares	3	5550·4
Variance ratio		$\dfrac{1869\cdot5}{5\cdot6} = 244\cdot6$ (significant)

* This will be recognised as a form of *a posteriori* experimentation.

V.135 Thus the "open" Borstals do get "better material" upon which to
work their reforming influence, so far as the experience tables enable us to
classify the new entrants into risk groups. But, over and above this, the
results show that there is a fair amount of the variance which can be
accredited to the type of treatment—or, in other words, those who are sent to
"open" Borstals do better than the prognosis suggests, whilst those who are
sent to "closed" do worse. We thus have evidence that the Allocation
Centres are, in fact, sorting out their material with the result that the "lesser
risks" are being sent to "open" institutions, and that the better results are
not completely explained by this fact, although both factors are working in
the same direction. This is, perhaps, not absolute proof that "open" treat-
ment is better than "closed", but it is extremely near complete proof. A
similar analysis could provide the rigorous proof which this lacks due to
incompleteness of the data, and the resulting uncertainty of the specification
of risk groups which are independent of the factors studied.

V.136 For those who may fail to follow the argument based on the analysis
of variance the basic figures may be presented simply, as follows: Our Cate-
gory A had, as we have said, an overall success rate of 7:1 and our Category
B a similar rate of 2:1. Combining these groups A B and similarly combin-
ing the opposite end of the scale, we have three groups—A B those with above
average chance of success, the centre group with average chance and those
with below average chance of success. A total of 127 cases fall into A B
category, 38 of whom were allocated to "closed" institutions, with 22 emerg-
ing as successes, whilst of the 94 allocated to "open" institutions 73 emerged
successful. Thus for group A B (where the prognosis was good) the rates for
the two types of treatment were: "Open", 78 out of 94 or 78% successful;
"Closed", 22 out of 38 or 67% successful. We may make similar calculations
for the three groups as follows.

TABLE 55

Prognosis and type of treatment analysed by criterion

Prognosis	Type of Institution			
	"Open"		"Closed"	
	Successes	Failures	Successes	Failures
Good AB	78	21	22	11
Average X	55	35	39	30
Poor CD	15	24	17	43
Total	143	80	78	84

Similarly the percentages based on the above table are:

Prognosis	"Open" success rate	"Closed" success rate
	%	%
Good AB	78	67
Average X	61	57
Poor CD	38	28

V. 137   Thus, within risk groupings, the "open" institutions show a consistently better success rate. The bad prognosis cases and the good prognosis cases, perhaps surprisingly, show a similar improvement. This is the more interesting since we have shown (Table 51) our sample did not have an atypical rate of success for "open" or "closed" institutions.

V. 138   Further analyses of this kind are held over until we have examined the remainder of the data in its elementary forms.

AGE OF COMMITTAL

V. 139   The statutory age limits for admission to Borstal were 16 and 23 years of age to which this study relates, but in fact no lads of 23 years were found in the sample. Most of the youths were in the middle of the age range, 17 being the modal group. Analysis of the age at committal by our criterion of success shows no significant difference with age. These basic data may be of interest because of this lack of association with the criterion, and we accordingly give the tabulation below.

TABLE 56

Age of committal, analysed by success or failure

Age at committal	Success		Failure		Total	
	No.	%	No.	%	No.	%
23+						
22	11 } 29	50	5 } 29	50	16 } 58	100
21	18 }		24 }		42 }	
20	33	43	43	57	76	100
19	44	39	70	61	114	100
18	57	45	69	55	126	100
17	112	50	113	50	225	100
16	50 }	45	59 } 62	55	109 } 112	100
Under 16	}		3 }		3 }	
No information	1		8		9	
Total	326	45	394	55	720	100

V. 140   We have earlier shown that the type of home background had little association with our criterion. It may be of interest to record the age at which the lads were committed to Borstal in terms of the same factor. It may be thought that the home background might be seen to be a more important factor here. This is in fact not so. Average ages have been computed for the different categories because the average makes the most efficient use of the small numbers in some of the categories.

TABLE 57

Home background, analysed by average age at committal to Borstal

Home conditions Living at/with	Number		Average age at committal
	No.	%	Years
Wife and child/children	11	2	19·5
Living alone in own house	2	—	20·0
Father and mother alive and living with	34	5	17·5
Father, mother and siblings	200	29	17·8
Father only, no mother	30	4	17·9
Father, stepmother	17	2	18·0
Mother only, no father	95	13	18·0
Mother, stepfather	29	4	18·0
Institution/H.M. Forces	55	9	17·9
Lodgings/relations/in-laws	79	11	18·4
No fixed abode	66	9	18·5
No information	83	12	18·0
Total	720	100	18·0

V.141   Analysis of the information relating to family criminal record with age of committal to Borstal did, however, show a definite trend. Those whose family had a record of crime tended more frequently to be sent to Borstal at an earlier age. The detailed analysis is shown below. Whilst this analysis on its own is not particularly enlightening it becomes more so when we look a little deeper into it. We bring in first another analysis and then relate these together to show this point.

TABLE 58

Age at committal to Borstal, analysed by family criminal record

Age at committal	Family criminal record?			Proportion[*] with family record %
	Yes	No trace	Not known	
16	27	66	16	29
17	45	161	18	22
18	24	91	11	21
19 & over	35	207	19	14
	131	525	64	20

* Excludes "not known" cases.

V.142   Now age at committal and the criterion showed no association (Table 56) whilst the criterion was also *not* significantly correlated with family crime record (Table 31). Let us denote these factors by letters, as follows: (a)=age at committal; (b)=success failure; (c)=family crime. We may note that the correlation between a and b is zero, thus $r_{ab}=0$, and similarly $r_{bc}=0$. We are interested to know how the correlations might appear if we held constant the correlation rac which shows a correlation of

some significance. We write these correlations, and may suggest each is of possible significance because the one we have just analysed interacts with the earlier ones, thus:

Hypothesis A r ab.c   of slight significance and tending to suggest that the earlier the committal the less the chance of success if we ignore family crime.

Hypothesis B r bc.a   of slight significance and tending to suggest that family crime and failure are associated if we ignore the younger age of committal. This is, of course, an obvious result, since (a) is insignificant and taken as zero.

Hypothesis C r ac.b   of slight significance and tending to suggest that age of committal and family crime record are associated (as shown) if the criterion is held constant. This also is an obvious result.

Which is the more meaningful suggestion is not clear. We can choose either early age of committal as prognostic of failure or family crime record, but we cannot add in both. This affords a very good illustration of the inefficiency of zero order correlations and the use of them as factors without considering "overlaps". In this case both the factors

    (a) age at committal

    (b) family criminal record

would separately show no association with the criterion because their effect was suppressed by another factor—namely the inter-association of the two. The degree of association is small, but it is a reasonable expectation. Any use of these factors for prognosis is, however, of doubtful value. It might be suggested that those lads who had a family crime record might be "picked up" by the police rather more quickly in their criminal careers, and it may be only this factor which gives rise to the correlations. Using crimes taken into account as an indicator of differential detection as before, we show below the results of analysing family criminal record by the number of offences taken into account.

TABLE 59

Family criminal record and crimes taken into account at Borstal sentence.

Number of crimes taken into account	Family criminal record						Total	
	Some record		No trace of record		No information			
	No.	%	No.	%	No.	%	No.	%
None	45	19	192	80	3	1	240	100
1–2	46	21	172	78	3	1	221	100
3–4	18	22	65	78			83	100
5 or more	21	18	90	79	3	3	114	100
No Information	1		6		55		62	100
Total	131	18	525	73	64	9	720	100
Average	2·12		2·14		2·89		2·15	

V.143   We have shown earlier (Table 58) that those with family records were younger when they were convicted for the first time, but the number of crimes taken into account at the Borstal sentence do not suggest that the lads from homes with a crime record had committed fewer crimes before they were arrested—at least they did not ask for any fewer to be " taken into account ". This gives more weight to the second hypothesis (B) which we derived from our partial correlation calculations, i.e. family crime is a factor affecting failure, and the earlier age of committal is only a further reflection of that fact. These analyses raise more problems than they help to solve and we cannot now develop this interesting by-product further.   We now examine the factors which become available after committal.

BEHAVIOUR IN BORSTAL

V.144   About two-thirds of the lads in the sample were in trouble whilst in Borstal for some misdemeanour, and a fair proportion were in trouble several times.   About one-third had absconded once or more, but only 6 cases out of the total sample (1%) committed further crimes whilst away and received

TABLE 60
Misdemeanours in Borstal analysed by success and failure

Misdemeanours	Success		Failure		Total	
	No.	%	No.	%	No.	%
None	132	59	91	41	223	100
1	71	50	70	50	141	100
2	40	45	48	55	88	100
3	24	41	35	59	59	100
4	17 ⎫		30 ⎫		47 ⎫	
5	9 ⎪		20 ⎪		29 ⎪	
6	4 ⎬ 49	34	14 ⎬ 97	66	18 ⎬ 146	100
7	8 ⎪		5 ⎪		13 ⎪	
8	6 ⎪		7 ⎪		13 ⎪	
9	11 ⎭		15 ⎭		26 ⎭	
No information	10	16	53	84	63	100
Total	326	45	394	55	720	100

TABLE 61
Abscondings from Borstal analysed by success and failure

Abscondings	Success		Failure		Total	
	No.	%	No.	%	No.	%
None	236	53	213	47	449	100
1	41	37	71	63	112	100
2 or more	36	40	54	60	90	100
Committed crimes while away and received further sentence	3		2			
No information	10	16	53	84	63	100
Total	326	45	394	53	720	100

further sentences. Both factors are associated with our criterion of success, with misdemeanours having the slightly higher degree of association. Tables 60 and 61 show these data.

V.145 It is interesting to note that there was no significant difference between the success rate of those who had absconded more than once and those who had absconded once only. The success rate for those who had no record of absconding (53%) was above the average, although it is true that those lads who were sent to "closed" Borstals (where the rate of success is lower) would have less opportunity of absconding. It seems that these data might be regarded as pointing to the possibility that those who are sent to "open" Borstals and who subsequently abscond are mainly responsible for the failure rate of the "open" Borstals, which, nevertheless, is only half of that for the "closed" institutions.

V.146 Since absconding is a source of trouble to the Commissioners, the Borstal Governors and, on occasions, to the public in the neighbourhood of the Borstals, it is interesting to speculate whether it would be possible to predict predisposition to abscond. The money available for the present study did not enable research to proceed very far along these lines, but some last analyses were made. From these it seems that although absconding was associated with a higher failure rate, absconding was not associated with those factors which were more directly associated with failure. For example (as shown in Table 2), age at first crime was associated with failure, but from the cross-analysis given below we find that the younger crime was commenced the less likely were Borstal boys to abscond, the reverse of what might intuitively be expected.

TABLE 62

Absconding from Borstal analysed by average age at first crime

Absconding from Borstal	Number		Average age at first crime
	No.	%	
None	449	62	14·08
1	112	16	14·19
2 or more	90	12	14·87
Committed crimes while away and received further sentence	6	1	12·00
No information	63	9	12·94
Total	720	100	14·10

TIME IN TRAINING

V.147 Unfortunately, we have here a further confounding of factors which could be sorted out, but which would require us to far exceed our terms of reference and an expenditure larger than that available for this research if the appropriate analyses were made. It is likely that those who began earlier in crime were more often allocated to the "closed" Borstals by the Reception Centres and they, therefore, had less opportunity of absconding. The first order correlations do not give us all the facts but seem to suggest that those cases which (according to one factor—age at first crime) were poor risks

absconded less, whilst it was known that those who absconded were worse risks than those who did not. It seems that it would be possible to provide a prediction equation which could determine the likelihood of absconding as efficiently as the equation we have derived for success or failure, but that the two equations would be materially different in respect of the items included and their appropriate weightings.

V.148 Whether or not a lad has absconded is doubtless a factor influencing the Governor's decision as to how long he should stay in Borstal. Indeed this factor may be one of the prime considerations. There was certainly a high degree of association between the time the lad had been detained and his record of absconding. It is also likely that Governors will take into account other misdemeanours whilst undergoing training. We show below the correlation between the two factors of misdemeanour (other than abscondings) and the number of abscondings and the time detained in Borstal training.

TABLE 63

Misdemeanours in Borstal analyzed by average time in Borstal training

Misdemeanours	Number		Average time in Borstal in months
	No.	%	
None	223	31	15·5 months
1	141	20	17·2 ,,
2	88	12	17·9 ,,
3	59	8	18·9 ,,
4 or more	146	20	21·1 ,,
No information	63	9	No information
Total	720	100	17·7 months *

* Excluding the 63 cases for whom there was no information

TABLE 64

Abscondings from Borstal analyzed by average time in Borstal training

Abscondings from Borstal	Number		Average time in Borstal in months
	No.	%	
None	449	60	16·6 months
1	112	16	19·1 ,,
2 or more	90	12	21·3 ,,
Committed crimes while away and received further sentence	6	1	
No information	63	9	No information
Total	720	100	17·7 months *

* Excluding the 63 cases for whom there was no information

V.149 The sample of cases where sufficient information was available was not large enough to make more detailed analysis of the components of the decision to retain a youth in Borstal.

V.150 It would be most valuable if we were able to show what period of Borstal training was most effective, or what was the minimum period possible without any material change in the rate of success. Unfortunately, it was not possible to go as far as this in the interpretation of data available. We are again faced with the problem of mixed factors. If a lad misbehaves in Borstal, he will most likely be retained longer, and we know that those who misbehave are less likely to become successes than those with a clean sheet. Again, it might be supposed that the longer the period of training the better might its effect be. There are thus at least three factors pulling in different directions and all confounded together in the basic data available. We will take our analysis as far along these lines as we feel the present data justify. Below we show the association between the duration of detention and the criterion.

TABLE 65
Time in Borstal training analysed by the criterion

Time in Borstal training	Success		Failure		Total	
	No.	%	No.	%	No.	%
Up to 12 months 4 weeks	26		26		65	
13 months	19 }84	55	17 }70	45	89 }154	100
14 "	26		27		53	
15 "	32		29		60	
16 "	36 }95	54	28 }82	46	63 }177	100
17 "	27		29		54	
18 "	20		26			
19 "	18 }68	49	23 }70	51	51 }138	100
20 "	20		13		88	
21 "	10		23			
22 "	18 }69	36	22 }121	64	31 }190	100
23 " or more	40		81			
No information	10	16	51	84	61	100
Total	326	45	394	55	720	100

V.151 There was thus a significant tendency for the failures to have been detained longer. But it must also be remembered that in simple terms the average youth stayed in Borstal for 15 months, plus 1 month for every misdemeanour recorded whilst undergoing Borstal training, and the record of misdemeanour is associated with the criterion.

V.152 Absconding was also associated with failure during Borstal training, and we found that absconding was also associated with the duration of training. Nearly one-third of the sample (32%) absconded at least once. With appropriate reservations in mind as to the facts brought out by the previous analysis, we might examine the time of training in more detail, although such detail does no more than to lay foundations for further work. The data arise as by-products of the main objective of this project, but waste might occur in future if the side tracks which we noted but could not explore, were not put on record.

V.153   We have earlier used the experience table classification as a measure of the "material" upon which the reforming influences were required to work. Since the complex analysis involving this classification includes the simpler, we present only one table covering the main factors.

TABLE 66

Analysis of time spent in Borstal by type of Borstal, prognosis group and success or failure

Score category	Type of Borstal								Total
	"Open"				"Closed"				
	Time detained				Time detained				
	Above average		Below average		Above average		Below average		
	Success	Failure	Success	Failure	Success	Failure	Success	Failure	
A } above B } average	18	12	55	9	12	6	10	5	127
X above	24	20	31	15	25	18	14	12	159
C } below D } average	8	12	7	12	10	27	7	16	99
Total	50	44	93	36	47	51	31	33	385

V.154   Summarising what appears to us to be the more important material from the above table, we may compare the success and failure rates experienced by risk groups for "open" and "closed" institutions, and for below and above average periods of detention.   As will be seen, the numbers on which the rates are based are often small and will consequently have wide margins of error.

TABLE 67

Comparison of time in "open" and "closed" treatment by category

Risk category	Proportion successful			
	Type of Institution			
	"Open"		"Closed"	
	Above average	Below average	Above average	Below average
AB	18/30=60%	55/64=86%	12/18=67%	10/15=67%
X	24/44=55%	31/46=67%	25/43=58%	14/26=54%
XD	8/20=40%	7/19=37%	10/37=27%	7/23=30%

V.155 Thus comparing the within category success and failure results, we find that those who were retained for a period below the average generally showed more successes in the trial period. We may arrange the results in order as follows :

"Open" Borstals, better results with class:

> AB from short period
> X from short period
> CD from long period.

"Closed" Borstals, better results with class:

> AB from neither
> X from long period
> CD from short period.

V.156 Unfortunately, this sort of analysis is merely illustrative of what might be done with complete data, and when there are available sufficient cases to withstand the analysis simultaneously of the other factors which are associated with the duration of detention in Borstal. There seems to be a case for investigating whether the period of detention might not be reduced with no ill-effects upon the results of the treatment. A shorter period of detention, it seems, might well be sufficient for those lads who fall into classes A or B.*

GOVERNORS' ASSESSMENTS

V.157 We have seen that duration of detention was associated with mis-demeanour and it is interesting to enquire how the misdemeanour of the lads affected the sort of report they were given by their Governors and how this fact may affect an appreciation and interpretation of these reports. The basis data are given in detail below (Table 68).

V.158 The simplification of these data is again possible in terms of degrees of association. The Governor's reports are quite strongly associated with the number of misdemeanours, as indicated by a contingency of 0·44. The similar coefficient (not r_ϕ) for the degree of association of the Governor's report with the criterion is 0·11. Let us suppose, however, that Governors ignored mis-demeanours when reporting, the similar measure of the degree of association would then be 0·18 with the criterion. The difference is not great, but suggests a tendency for the effect of misbehaviour in Borstal to be overweighted in the Governors' assessments. This affords an example of a factor (which is associated with the criterion) being given other than optimum weight, with the result that the prognosis was not so effective as it might have been.

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* It will be recalled that economy forced us to adopt a fixed date criterion. This fact might have some very slight effect upon our result in this discussion. Those lads who were retained the longer were exposed to the risk of failure for a shorter period than those who had thorough-gan an licence earlier than average. Any bias due to the fixed criterion date would mean that the longer the training the better the chance of success *due to the shorter period of exposure to risk*. Thus any bias *enhances* the indication that shorter training periods produce better results. The bias, if existent, is extremely slight and no argument could be based on it. It is later proved that it has no effect upon the main purpose of this study in the establishment of a prediction system. The addition of time to the testing period has no differential effect upon the risk categories but adds a *constant* to each category after a relatively short period. The possible effect (since the rate of new failure has by 3 years of exposure diminished to 1% per month) might be to add a total of 3 cases to the failures who had been retained for longer than average for all the categories in Table 73. A negligible effect, but in an interesting direction.

TABLE 68

Governor's report analysed by the criterion and number of misdemeanours

Number of misdemeanours in Borstal	Success							Failure						
	Governor's report					Total* successes	Average of Governor's prognosis †	Governor's report					Total* failures	Average of Governor's prognosis †
	Very good	Good	Fair	Poor	Bad			Very good	Good	Fair	Poor	Bad		
0	17	50	33	11	1	112	2·6	9	27	27	17	1	81	2·5
1	5	15	25	17	1	63	3·1	2	16	21	16	8	68	3·1
2	2	17	13	7	1	58	3·3	1	13	19	8	4	45	3·3
3	1	7	17	6	—	34	3·2	—	8	15	13	3	39	3·0
4	—	2	6	6	2	16	2·7	—	6	10	4	3	23	2·8
5	—	1	1	6	1	9	2·9	—	4	5	3	3	15	3·0
6	—	1	5	2	1	9	3·0	—	2	9	1	2	14	2·8
7	—	1	1	5	1	8	3·0	—	4	4	3	—	11	2·4
8	—	1	—	—	—	3	3·8	—	1	2	1	3	7	3·3
9†	—	4	3	1	3	11	3·0	—	6	7	1	3	14	2·1
Total‡	25	99	104	54	8	288	3·0	12	87	119	72	15	305	2·5
Average misdemeanours	0·6	1·4	2·0	2·4	2·8	1·8		0·8	1·7	2·7	3·0	4·9	2·5	

* Excluding cases which were inremediable and those for whom there was no information.
† The weights attached to the assessments in order to calculate the averages were Bad=1, Poor=2 . . . V.G.=5.
‡ Excluding cases for whom there was no information.

Misbehaviour, etc., should receive a weight, but even if given no weight the prognosis would have been better than that which resulted from its being given too much weight.

V.159   At the time that this study was made there was little other evidence relating to conduct in Borstal than that which we have examined. It was considered that the frequency with which letters were sent and received might indicate the degree of contact with the "outside world" but, unfortunately, record sheets were not maintained in a sufficient number of files for this evidence to be used.

V.160   In addition a system of grading had been in use for some considerable time, but when this study was made there was no uniformity in recording the data and different Borstals operated the scheme differently. In future studies, grading should prove of considerable interest and value.

V.161   Objective evidence of conduct in the Institution might be of value in improving prognosis and might lead to further data of use in determining the optimum period of detention for different classes of lad. At the moment only subjective judgments are available to determine these actions, and, as we have seen, there is some evidence that the weight given to certain factors is not the best possible weight. In other words, the subjective judgments were influenced by factors which, whilst not irrelevant, were taken too much into account.

PART VI

FACTORS ON DISCHARGE

V.162   The main weight of our analyses in this project has been given over to a study of the factors which were known before the youths were committed to Borstal. This was essential if we were to utilise information to build tables of experience of value r.s prognostic tools.

V.163   It would, however, be a very incomplete story if we said nothing more about what happened to our cases than was implied in our criteria of success and failure. A contribution towards filling in this gap in our story is made by the analyses which follow. The information we have been able to present affords no more than a sample of the material and may be regarded as examples of a field yet to be covered. The problems of resettlement (which includes after-care) would need to be approached with a different research design to that used on this study if the optimum utility were to be obtained from the project.

WHERE THE BORSTAL BOYS WENT ON DISCHARGE

V.164   Rather more than two-thirds of the releases went first to their home, whilst a fifth went straight into the Services. In general, those going into the Services without first going to their home would either be unwelcome at their homes or have no home that they desired to return to. The highest success rate was noted in the cases going first to their homes. The data are shown below.

TABLE 69
*Where the Borstal boy went on discharge,
analysed by criterion*

Where he went on discharge	Success		Failure		Total	
	No.	%	No.	%	No.	%
Home	199	51	192	49	391	100
Forces	52	43	69	57	121	100
Other	22	31	49	69	71	100
No information	53	39	84	61	137	100
Total	326	45	394	55	720	100

$x^2=10.8$ for 2 degrees of freedom
P less than 1% level

V.165   A number, who went home first, obtained entry to the Services as
their first employment on discharge.   It will be recalled that the lads in our
sample were released from detention in 1947 and 1948.   The proportion then
obtaining employment in the Services was large.   It is not known whether
the proportion is today similar to that obtaining at the time of this project.
The analyses of first employment on discharge is given below.

TABLE 70
*Type of first job on licence,
analysed by criterion*

Type of job	Success		Failure		Total	
	No.	%	No.	%	No.	%
H.M. Forces	144	49	149	51	293	100
Unskilled	92	45	113	55	205	100
Others	37	45	46	55	83	100
No information	53	38	86	62	139	100
Total	326	45	394	55	720	100

V.166   From this table it appears that the type of first employment obtained
on discharge (so far as we may classify it at this stage) was not useful as an
item of prognosis.   It appears, for example, that those who entered the
Forces were no more or no less frequently failures than those whose first
employment was in civil life.   The factors involved are not simple and this
overall result might occur due to a masking of overlapping factors such as we
have earlier noted in connection with the two factors of family crime record
and age of committal to Borstal.   We noted in Table 69 (above) that those
who went home did better than those who went directly into the Forces.
The lads who went home first, but whose first employment was in the Services,
bring the Forces percentage of failures down from 57% to 51%.*   Thus the
failure score for the first group is (as shown) 57% and for the second part of
the Services intake 47%.   This is a significant difference.   On the other hand

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* The Forces component is made up of Home and Forces 172, Forces direct 121, Total
Forces 293.

the Services employ a selection procedure which may *indirectly* screen some of the cases who may apply for entry. If we compare those who went home first and then into the Services with those who took civil employment, the Services show a slightly (and significantly) better success rate, but the numbers were too small to "hold constant" (and to disregard) the possible interrelation of the factors of returning home and entry to the Forces. The influence of those complex factors seems to be small and we may conclude that, in all, Service life did not offer any better chance of success, nor did it prejudice chances of success.

V.167   In this case we have not made any attempt to classify the type of home to which the lad returned, since, again, any sub-analysis would reduce the numbers to insignificance.

V.168   The type of work that Borstal boys are able to take up is, of course, restricted by the very fact that they have a crime record. There is little point in showing that Borstal boys do not often have "good jobs", since employers will seldom be prepared to accept for a "good job" the youth who has a record. Since the great majority of Borstal boys have a crime record before entry to Borstal, the inter-association between crime and opportunity of employment will already have begun to operate. The majority of lads at entry to Borstal come from unskilled occupations and the majority return to such grades of work. The smallness of the sample of occupations other than unskilled and the Services made it futile to break down the categories further than the three classes shown above. In Table 71 (below) we show the occupation taken up on licence and the occupation of the youth prior to Borstal committal.

TABLE 71
Occupation on committal to Borstal and on discharge

Boy's last occupation before Borstal	First job on licence									Total
	Errand/lorry driver's mate, etc.	Labouring and other unskilled	No employment since school	H.M. Forces	Skilled in building trades	Other skilled trades	Apprenticeship (bound)	Others	No information	
Errand/lorry driver's mate, etc.		7		28	1	3			9	43
Labouring and other unskilled		75		104	8	13	1	7	41	249
No employment since school			2	16		1		2	1	27
H.M. Forces				2						2
Skilled in building trades	1			1	1					3
Other skilled trades		10		9		1		1	1	22
Apprenticeship (bound)		3		6				1	1	11
Others				4					2	6
No information	4	122	2	128	12	10	1	12	83	354
Total	5	205	2	293	21	29	2	24	139	720

V.169   We may analyse the Governors' assessments in terms of the same occupational classification as that used in Table 70 (above) for examination of success and failure rates.   Here, it seems that Governors were unduly influenced by what they believed were the resettlement conditions likely to obtain on release.   They rated "very good" far less frequently when the lad went to an unskilled occupation than when he went into the Services or other types of work.   This was not supported by the facts where unskilled licence occupations showed no less a success rate than the "others" category.   This analysis is given below.

TABLE 72

Governor's prognosis analysed by type of
first job on licence

Governor's prognosis	Type of first job on licence								Total	
	H.M. Forces		Unskilled		Others		No information			
	No.	%	No.	%	No.	%	No.	%	No.	%
Very good	114	39	52	25	35	42	—	—	211	28
Good	130	44	100	50	37	45	3	2	270	38
Fair	43	15	45	22	7	8	2	1	97	13
Don't know and unooksale	5	2	7	3	4	5	—	—	16	2
No information	1	—	1	—	—	—	134	97	136	19
Total	293	100	205	100	88	100	139	100	720	100

PERIOD CRIME FREE

V.170   The average failure in the sample had remained unconvicted for a period of 11 months after discharge on licence.   This included any time on remand or until the further crime was proven.   The second quarter (3 to 6 months) after discharge saw more failures than any other quarter, this period similarly included any period on remand.
V.171   These data may be pictured graphically and will help to show grounds for our belief that the period of testing allowed before the sample was classed as either successes or failures was, in general, adequate.   The rate at which lads fail was, 6 months after discharge, continuously decreasing with time—the longer time crime free, the less the chance that crime would be returned to.*   During the first 6 months 142 of those who failed had already failed, whilst in the next 6 months 90 failed and after 18 months' crime free only 37 failed in the following 6 months.   The longer the period allowed for follow-up, the fewer extra cases are included.   It seems that even if as long as twenty years were left for testing, a few would fail in the twenty-first year.   The graph (Chart II) on p. 127 shows the failures against time in this sample.

* See also Chapter I.

TABLE 73

Period from discharge to reconviction
(failures only)

Period crime free after discharge	Number of cases		Average per month	Percentage crime free at given date
				%
Less than 4 weeks	4		4	99
4–6 weeks	13	58	27	98
6–8 „	14			96
2–3 months	27		27	92
3–4 „	33	84	33	87
4–6 „	51		26	80
6–9 „	53	90	18	72
9–12 „	37		12	64
1–1½ years	47		8	59
1½–2 „	36		6	54
Over 2 „	47		—	47
Total	362*			

* Excluding 5 cases who escaped and were not recaptured and 27 on
whom there was no information.

Chart II

Graph showing monthly rates of failure
in sample and estimated extension

V.172 This analysis is interesting in that it suggests a further criterion which might be used. We might consider the period "crime free" as a further criterion. It seems likely that such a criterion of the seriousness of the failure might be better in some ways than the one of the number of crimes committed. One sample analysis may be of use to illustrate this here, and we return to the supplementary problem of time of exposure in Chapter VI. We noted that the type of employment on discharge was not significantly associated with success or failure. The average time crime free for the occupational classification gives the following figures:

No information group	10·5 months	
H.M. Forces	10·7	,,
"Other" occupations	11·8	,,
Unskilled occupations	11·9	,,

V.173 Similarly, if we leave out the successful cases* and examine the Governors' and Housemasters' reports in terms of this factor, we find that those where the Governors reported most favourably remained crime free for twice the average time of those where they reported most unfavourably. Analysis of Housemasters' reports shows a similar result. The detailed analyses are given below.

TABLE 74

Governor's report analysed by average period crime free

Governor's report ‡	Average period crime free months	Base number§
Very good	18·16	11
Good	12·56	84
Fair	11·87	109
Poor	10·43	72
Bad	9·07	15
Uncodeable	13·07	14
No information	9·28§	60
Total	11·472	365

‡ This analysis obscures the fact that almost as many failures as successes were rated as "good" or "very good." See Appendix V.

§ Total excluding those who had no further crime and those for whom there was no information.

* This analysis obscures the fact that almost as many failures as successes were rated as "good" or "very good." See Appendix V.

TABLE 75

*Housemaster's report analysed by average
period crime free*

Housemaster's report*	Average period crime free	Base number†
Very good	19·36	11
Good	12·08	92
Fair	11·62	126
Poor	11·21	67
Bad	10·59	15
Uncodeable	7·00	2
No information	9·15	52
Total	11·47	365

* System of interpretation "A".
† Total excluding those who had no further
crimes and those for whom there was no information.

V.174 The period of time which elapsed between discharge and the proving of the first crime is, however, subject to the differential rate of detection to which we have referred earlier. The brighter the lad, the more enterprising his crime, the more difficult he will be to apprehend. Those who were subject to the stiffest discipline (H.M. Forces cases) remained crime free for a lesser time than others, but this may be due to the fact that the whereabouts of serving soldiers were more easily established.

V.175 It is interesting to compare the number of crimes committed during the period of follow-up (the other criteria we have used as indicative of the degree of failure) with the period crime free, when broken by the same factors. An example of this is the analysis according to the type of job on licence.

Type of job on licence	Period crime free	Average number of crimes
No information group	10·5	4·64
H.M. Forces	10·7	2·67
"Other" occupations	11·3	2·81
Unskilled occupations	11·9	2·89

V.176 It will be seen that the Forces group is out of rank. In general, the longer period crime free the fewer the number of crimes, but the Services personnel, although apprehended on average earlier, had fewer crimes during the period of licence and follow-up. This is in accord with an hypothesis that the period crime free is associated with ease or difficulty of detection and apprehension and that Service personnel are easier to apprehend.

V.177 It is, of course, not possible to analyse number of crimes by the period crime free with any real meaning, since those who are apprehended early in their term of licence will be removed from the temptation to more crime, at

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least for a period. If they were not so apprehended they would doubtless accumulate more crimes to their credit in this period.

V.178   Another indication of the seriousness of the failure might be thought to be found in the type of treatment given for the offence. The disposal of the failures at their first conviction after their Borstal discharge is shown in Table 76 below. This is the sentence they received which involved their being classed as "failures".

TABLE 76

Sentence on first crime after discharge, analysed by average number of crimes after licence to 31st August, 1951

Sentence on first crime after discharge	Average number of crimes after licence	Number on* which average was based	
		No.	%
Fined, bound over, P.O.A., and conditional discharge	2·3	63	18
Borstal licence revoked	2·7	58	16
New Borstal sentence	2·3	17	5
Prison up to 1 year	2·5	94	26
Prison up to 3 years	2·5	41	11
Prison over 3 years	2·7	3	1
Any other detention	2·6	15	4
In mental institution	1·5	2	1
No information of sentence	1·7	10	3
No information of case	4·6	53	15
Total	2·9	356	100

* Excluding those who were unsuccessful and those for whom there was no information on the number of crimes after licence.

V.179   It will be noted that about a fifth of these first offences after Borstal may be regarded as receiving minor punishments. We did not feel that this afforded good grounds for regarding the cases as "minor failures". It will be seen from a study of Chapter VI that such a course was quite unnecessary. The dichotomy into success and failure and the scoring system which maximised the identification of these two classes at the same time and in an identical form also identified the seriousness of the failure and the degree of success in so far as our two supplementary criteria afforded a measure of these.

V.180   The seriousness of failure was, we considered, described by the number of further crimes committed. Whilst it is true that some youths may have had little opportunity of committing many crimes since they received long periods of detention this measure avoids some of the problems of the alternative criteria of the period crime free. The number of crimes included "taken into account" and thus any bias caused by differential detection rates would act in a contra direction with respect to this criterion and to the main success-failure criterion. In the main criterion there was a chance that some of the brighter lads would be misclassified because they had avoided capture;

on this criterion those who avoided capture for a while would be classed as worse failures than those whose capture prevented their record growing. Since the weights obtained for the factors in the score do not differ for either criterion, we may assume that bias due to the failure to identify all failures (either because of lack of time in follow-up or because of difference in detection) is extremely small. This must, indeed, be so if the score gives every lad an ordinal position on a scale of criminal tendency. The cutting point of success-failure does not then have a serious effect if it is moved up or down the scale by even quite large proportions. If the serious failures fail earlier and fail more often, then a follow-up period of five or ten years would give much the same result as a follow-up (testing) time of one to two years. The evidence which suggests that this is so is available from within this study and is supported by the other works to which we have referred. We mentioned studies with long and with short testing periods, and we noted that the factors found to be of importance were the same as or similar to our own. The evidence from within this study is somewhat complex and we will defer the examination of the effect of the period of exposure upon the prediction until we have presented the basic prediction tables.

V.181 Only a third of the failures had added only one crime to their record after discharge, and the average was 2·9.

TABLE 77

Number of crimes after licence to 31st August, 1951, analysed by criterion

Number of crimes	Success		Failure		Total	
	No.	%	No.	%	No.	%
No information			16	4	16	2
0	326	100			326	45
1			129	33	129	18
2			91	23	91	13
3			39	10	39	6
4			25	6	25	4
5			20	5	20	3
6			10	3	10	1
7			9	2	9	1
8			9	2	9	1
9+			23	6	23	3
Escaped and not recaptured			6	2	6	1
Sent to prison			17	4	17	2
Total	326	100	394	100	720	100

Average number of crimes=2·901.

V.182 Thus, if we consider either the type of disposal of the youths at their first appearance in Court after discharge, or their number of offences, we might conclude that the majority of failures which occurred within our period of follow-up were (if we may be permitted a loose phrase) fairly serious failures. It may be that those who fail after the end of our follow-up period will be less serious failures. There is indication of a trend in this direction from the

analysis of the disposals at the first conviction after Borstal training and the period crime free.   From Table 78 (below) it will be seen that the less serious penalties amounted to only 7% amongst those failing within 4 months of discharge, but to 81% of these failing after 12 months of testing time.

TABLE 78

Sentence on first crime after discharge, analysed by period crime free

Sentence on first crime after discharge	Period crime free						Total*	
	Up to 4 months		4–12 months		Over 1 year			
	No.	%	No.	%	No.	%	No.	%
Fined or conditional discharge	5	7	23	20	35	31	63	21
Periods of detention	67	93	89	80	76	69	232	79
Total	72	100	112	100	111	100	295	100

* Excluding all who were successful, those for whom there was no information on either variable and those in a mental institution.

TABLE 79

Period between leaving place of detention and first crime, analysed by average number of crimes after licence to 31st August, 1951

Period between leaving place of detention and first crime	Average number of crimes after licence	Number on* which average was based	
		No.	%
Less than 1 month	4·0	4	1
4–8 weeks	3·5	18	4
6–8 ,,	4·9	14	4
2–3 months	3·3	25	7
3–4 ,,	3·6	31	9
4–6 ,,	3·9	50	14
6–9 ,,	2·9	51	14
9–12 ,,	2·2	37	11
1–1½ years	2·3	47	13
1½–2 ,,	2·1	35	10
Over 2 ,,	2·1	47	13
Total	2·9	354	100

* Excluding successes, and those who were sent to prison or those who escaped from Borstal and those who were not recaptured.

V.183 This table makes it appear that the longer the follow-up period the greater the proportion of those classed as failures on "technical" grounds. This is confirmed by Tibbetts' finding to which we referred in our chapter on the history of prediction (1.48). This criterion of degree of failure has arithmetical advantages over the criterion of period crime free, since in the latter case those who have succeeded have an undeterminable time crime free and there are thus limitations on the calculations possible. The use of the number of crimes as a measure of degree is also realistic. In Table 79 (p. 132) we compare the averages of the numbers of crimes with the period crime free, but, as we have already remarked, this is not a particularly meaningful analysis, since those who have committed crimes were, for a time, removed from the opportunities of committing more. The result is, however, of considerable statistical importance since it disposes of some fallacies which might be put forward.

V.184 It is valuable from the statistical methods point of view to note that the removal from opportunity does not remove the correlation between the period of crime free and the number of crimes committed.

V.185 In future studies it is hoped that we may be able to continue to follow the careers of Borstal boys beyond their immediate discharge and to say something more about problems of resettlement. On this occasion our evidence from direct analysis ends here.

SUMMARY OF CHAPTER V

S.V.1 There were many stages in the process of derivation of the experience tables required by our terms of reference. Because this was the first "prediction study" of this kind to be made in this country we considered that it would be desirable not only to report our results and methods but also to put on record a number of the basic analyses. These basic data are of no value in themselves but may be of considerable utility should further research be carried out in this field. In order to make the presentation interesting and to suggest lines for further research and the methods which might be employed, we have from time to time explored some developments of the basic data (beyond our terms of reference) where the results of this research might be both direct or important.

S.V.2 For most of the basic analyses the sample was split into two groups—the successes and the failures. The total of the two groups, of course, gives a picture of the Borstal intake. By the nature of the inquiry the total picture of Borstal populations was not particularly valuable since there were few factors where comparisons might be made with non-Borstal or unconvicted samples. It was, for example, of no value to learn that 124 out of 642 cases had spent a period in a non-penal institution, unless we could estimate what proportion of the general population of youths had also spent some time in non-penal institutions. Similarly it was meaningless to comment that 127 cases out of a known 687 came from "broken homes" unless we knew the proportion of "broken homes" that represented the "norm". So far as could be assessed, the proportion of broken home backgrounds amongst Borstal boys was not very much in excess of the norm, but such comparisons are of doubtful value where the data derive from different sources and where the definitions are not laid down at all precisely.

S.V.3 The average age at first finding of guilt was 14 years. First offences were nearly all offences against property and no useful differentiation was obtained by classifications by types of offence.

S.V.4 The associations between various characteristics and experiences of the youths and their likelihood of failure or success were considered in this chapter in a time order. In summarising these data there seems to be no good reason why this order should be preserved when it might be more informative to rank the several factors according to their degree of association with the criterion. The following tabular layout shows the basic data so arranged for a sample of the 60 items covered:

	$r\phi$
Prognostic of success	
Fewer previous convictions	0·31
Fewer previous treatments	
(a) No Approved School	
(b) No probation (see below)	
(c) Not fined	
Stable job record assessed by	
(a) Lowest time in one job	0·25
(b) Average time in one job	0·20
Living at home	0·21
Discharged from Borstal after such training	0·20
Did not abscond during Borstal training	
Convicted later in life	
Housemaster's prognosis—good	
Governor's prognosis—good	
Went home on discharge	
Home conditions prior to Borstal assessed as "good"	
Prognostic of failure	
More previous convictions	0·31
Previous treatments include	
(a) Approved School	0·31
(b) Probation (see below)	
(c) Fined	0·24
Frequent job changes	
(a)	0·25
(b)	0·20
Retained in Borstal for a long period (see below)	0·20
Absconded during Borstal training	0·19
Early age of first conviction	0·19
Housemaster's prognosis—bad	0·18
Governor's prognosis—bad	0·18
Did not go home on discharge	0·17
Home conditions prior to Borstal assessed as "fair" or "bad"	0·16

The order of degree of association has been broken where two or more items are directly associated.

S.V.5 Of equal interest were the factors where no significant association was found between the criterion and the factors examined. A shortened list is given below.

Whether previously on probation or not*
Age of committal to Borstal
Intelligence test scores
Family crime record
Number of siblings
Population of town
Estimate of "class" of town
Type of crime
Broken or unbroken home
Overcrowding of home
Religion professed
Duration of stay at address
Truancy or no truancy from school
School reports
Physical condition
Occupation before or after Borstal training
Time in Borstal training

* After adjustment (*see text below*).

S.V.6 It will be noted that we have included two items in both lists showing them as significant and as not having a significant association with the criterion. These two items illustrate the dangers of direct and simple interpretation of the association between two things. Although the time a lad spent in Borstal was, *given no other information*, prognostic of success or failure, when the type of Borstal was taken into account together with the chances of success irrespective of the time of detention and given that discharge or retention outside the limits of the variation observed in this sample was excluded, then we could say that the time of detention was of no significance. Similarly probation was prognostic of failure if we used that information alone, but when we made allowance for the fact that those who had been on probation in the past began their criminal careers earlier, their probation ceased to be prognostic of failure. Obviously we cannot count into our prognosis of a youth *both* that he began crime early and that he had previously been put on probation. By "scoring" him for having been on probation we are taking into account the earlier age of commencing crime in so far as this affected our criterion. Since, however, the simple fact of whether or not the youth had been on probation contained *as much prognostic information* as the age of commencement of crime and was more reliably recorded, we used the former in our future development of the statistical system of prognosis. Probation like Approved School experience is the result of a complex of factors and for our purposes it was simpler to use the resultant factor than a complex of others. The correlation between failure and probation and Approved School treatment does not mean that these treatments are valueless. The boys who ended at Borstal were probation and Approved School failures. We do not know from this study what happened to the successes. All we know is that probation failures and Approved School failures were also likely to be Borstal failures.

S.V.7 The supplementary analyses we have made in this chapter are mainly illustrations of the error of using simple direct correlations (zero orders) where other data are also available. In the process of illustrating this fact we showed that:

(a) "Open" Borstals had a better success rate than "closed", even after all possible allowances had been made for the fact that the youths sent to "open" Borstals were "better risks".

(b) The system of allocation to type of Borstals carried out by the Reception Centres at Latchmere House and Wormwood Scrubs was remarkably effective.

(c) There was every reason to believe that long periods of detention (above average) may yield no better results than periods of, say, one year.

(d) Governors and Housemasters in reporting on their cases on discharge were too greatly influenced by misdemeanours in Borstal.

(e) Either early crime record or family crime records were prognostic of failure after Borstal training, but (because of overlap) not both. We were led to discuss the problems of differential detention rates for offenders of different classes of background and of different intelligence levels.

S.V.8 These findings resulted mainly from feeding back into the experimental system the results of the system of prognosis which it was our reference to

find. They were merely illustrative of method and not final and absolutely conclusive results, mainly because data were not always available, and we could be certain that those cases where data were missing were different from those cases where data were available.

REFERENCES TO CHAPTER V

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(2) T. Corlett, "A Use for the Jury Qualification in Sample Design", Applied Statistics 1 (i) 1952, pp. 34–6.

(3) L. T. Wilkins, "Domestic Expenditure on Fuel", Social Survey Report No. 130 (c) (1949, H.M.S.O.).

(4) L. T. Wilkins, "Estimating the Social Class of Towns", Applied Statistics, 1 (i) (1952) pp. 27–33.

(5) P. Gray and T. Corlett, "Sampling for the Social Survey" (J. Roy. Statist. Soc., A, 113), p. 150.

(6) H. Mannheim, "Social aspects of crime" (1946, London, Allen and Unwin).

(7) L. T. Wilkins, "The Employment of Adolescents", Social Survey Report No. 148 (A) (1949, London, H.M.S.O.).

(8) "The Census of the United Kingdom" (London, H.M.S.O.).

(9) Sir Lionel W. Fox, "The English Prison and Borstal Systems" (1952, Routledge and Kegan Paul).

(10) Report of the Commissioners of Prisons for the year 1952 (London, H.M.S.O.).

CHAPTER VI

Prediction Tables

VI.1 The various methods used by previous workers in their attempts to predict success and failure of convicted persons have been briefly described earlier in this report. Several books have been written and perhaps hundreds of articles criticising the different methods employed. There is no need to repeat here those items from these criticisms which we regard as valid nor to state what we believe to be the major weaknesses of previous studies. Any attempt to build a prediction equation from data which were not obtained in the first place with this objective clearly in mind, cannot be perfect and we realise that there are imperfections in our own work.

VI.2 We will first try to state what we regard as the important requirements of any scoring system and to show how well, or how badly, we have been able to meet them. We shall then go on to describe in more detail our own methods and to report on their degree of success and their limitations.

PART I

REQUIREMENTS OF PREDICTION EQUATIONS

VI.3 Prediction tables seem to us to have four basic requirements, simplicity, efficiency, repeatability or reliability, and validity. We shall examine the implications of each.

SIMPLICITY IN OPERATION

VI.4 The final prediction equations must be easy of application to any case, no matter how unique the situation envisaged. No technical skills other than ability to do simple multiplication, addition and subtraction should be required. This does not mean that the techniques used in obtaining the simple end result should also be simple. If the techniques of deriving a prediction table were to be such that all could understand each step, a severe restriction on efficiency would be imposed. But, if a complex system is used in deriving the simple end result, the methods must be capable of explanation in principle, so that every reader can follow the limitations of the essential mathematical concepts. Confidence in the results of the prediction tables should derive both from the attempt and from demonstrations by example. The user must have confidence in the tool he is using and this confidence should not be built only on a blind faith in the integrity and competence of the compiler of the system. We shall attempt to fulfil our own prospects by giving the basic data in two forms, one by argument and the other by showing the mathematical model in some detail. We thus hope to convince those unfamiliar with the algebra and the geometric models of the reasonableness of the result. We shall reduce the end result to "rule of thumb" procedures.

VI.5 Simplicity of procedure in this respect we have interpreted to mean the following restrictions. The tables must be applicable in a *general form* to any case. Instructions as to procedure and any tabular matter necessary must be

reduced to one schedule, to occupy, say, only one sheet of quarto paper. No reference to external tables (other than this one sheet) nor memory of numerical facts must be required.*

VI.6   Some data must, therefore, be "thrown away" because its use, even at the final stages of application would involve references which would be regarded by some users as complex. The chance of error in calculation must be reduced to a minimum and time taken to make the calculations should be very short.

VI.7   We must also have regard to the quality and quantity of data likely to be available in the worst cases. Our dependence on the data must be conditioned by and be in terms of its reliability.

EFFICIENCY

VI.8   Our second requirement is efficiency. The term efficiency as we use it here has a special technical meaning. In simple and not quite accurate terms, this means that the maximum use must be made of the information we have. This requirement, if taken fully into account, opposes our requirement of simplicity by reason of the type of data we are using.† We must therefore find a compromise and require the maximum use be made of data which does not involve the introduction of complex final tables. The main loss of efficiency in previous criminological prediction has been due to the failure to identify and exclude those parts of factors which "overlapped" each other and thus contributed nothing to the prediction. All overlapping is inefficient, but inefficiency may be found in other methods than in those which involve overlap.   We shall, for example, reach an apparently better but less efficient result if we extract too much information from too many factors.   This is due to the fact that for each additional factor "degrees of freedom" are being used up.   If we had, say twelve cases, and five or six factors each considered at two levels (yes or no, above or below average, etc.) we could in general specify or "predict" every case of these twelve accurately, but such prediction although appearing to be perfect would be wholly meaningless.   This is due to the fact that we regard (for purposes of prediction) the sample of Borstal boys in 1946–7 to be a sample in time as well as a sample of one in three in the year selected.   Associated with each factor there is a chance variation, or more correctly, a sampling error or variance.   If our number of factors and the levels at which we consider them becomes large in comparison with the number of cases we should be using too much of this chance or error variation in determining our prediction, and the equation although specifying the group on which it was based could not be expected to predict any other cases unless (which we know to be most improbable) the factors were invariant.

VI.9   This aspect of prediction has been discussed by Reiss[1] and in our Chapter III.   It is his point of "stability".

VI.10   An *efficient* prediction table is thus one which achieves its purpose with the *smallest* number of factors which contribute significantly (i.e. above chance

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* The latter restriction is important in one technical point: it means that data may not be "transformed" (logarithm or sine transformations for example are ruled out), since such requirements would need reference to other tables and extra skills in using them.   This is an unfortunate restriction when we consider the skewness, for example, of the distribution of the number of crimes committed by young offenders.
† With "skewed" distributions we shall not reach maximum efficiency without transformation.

variations) to the specification. In this case efficiency and operational simplicity work in the same direction.

VI.11 We have remarked elsewhere that in "500 Criminal Careers" the Gluecks obtained a prediction value indicated by their coefficients of contingency of 0·42 using one factor alone, whilst when they used six factors (including this one) the value of the prediction rose only to 0·45—a difference 0·03 which was an insignificant gain. This was due to the use of inefficient statistical methods where the term "inefficient" is used in its technical sense as indicated above.

VI.12 This does not mean that the Gluecks' system will not work—it does—but rather that a system could be devised which would (with their problems and their data) work better. Reiss[1] has contributed a useful practical demonstration of the effect of using few and several factors by comparing the results obtained for many types of prediction equations. Reiss's contribution makes clear by practical evidence the correctness of the theory we have discussed.[2]

VI.13 It is clear that most of the loss of information which the result in "500 Criminal Careers" indicates is due to overlapping of factors and to the consequent double-counting of some elements. The Gluecks later recognised this, but their remedy was to reject factors which overlapped rather than to identify the unique parts of each factor and to utilise this information to full efficiency. The individual contributions of each factor in this study were far lower than the individual contributions found in "500 Criminal Careers" (our highest coefficient of contingency was 0·28 whilst the Gluecks' "work habits" was by itself 0·42).[3] But by combining in an efficient manner a small number of such factors we derive an overall prediction precision equal to that of "500 Criminal Careers". To illustrate the basis due to overlapping and inefficient statistical methods we might compare the individual contribution of each component factor to prediction and the combined score as found in "500 Criminal Careers" and in this study.

Pre-reformatory and pre-Borstal factors
Factors arranged in order of individual prediction value

	1	2	3	4	5	6	Total
500 Criminal careers	0·42	0·33	0·29	0·29	0·27	0·26	0·45
Current study	0·28	0·21	0·21	0·19	0·17	0·16	0·45

VI.14 It will be seen that there was considerably less information in each component item in the present study, but that the system of building the equations leads to the addition of the effective parts of each relatively small contribution with the end result no worse than that achieved by other statistical systems where one component contained about four times the information.†

VI.15 It may be asked why the amount of information in each component was lower in the current study than in the earlier similar work in the U.S.A. This question, although somewhat irrelevant to the argument, ought perhaps

* Reiss's finding although derived laboriously by empirical methods could have been very shortly and precisely obtained by algebra.
† Square of these coefficients are rough indications of the amount of information.

to be answered here. There are two main reasons. The most important is
doubtless the fact that Borstal boys are very much more alike than the
parolees of the earlier study. Borstal entrants are a highly selected group
with respect to age, type of criminal career, past punishment record, physical
standard and intellectual level. We were attempting to discriminate between
lads who were very much alike—perhaps far more alike than those in the
U.S.A. parolees study. The second reason may lie in the nature of the data.
In the earlier study special questionnaire and other data were available
whilst in the present study only administrative records were utilised.

REPEATABILITY OR "RELIABILITY"

VI.16   The third requirement is that of repeatability. In some respects this
requirement follows from our requirement of simplicity, for that the degree of
simplicity specified as necessary in prediction barred any but elementary
skills. No variation in the prediction derived should arise when computed
by different persons of average intelligence nor should any different result
occur when the computation is carried out by quite inexperienced personnel.
Any special skills which derive from experience of dealing with offenders
should be exercised independently of the prediction equations, and not be
needed in deriving the basic data for use in the prediction. We have dis-
cussed the problem of subjective judgment and shown that even two highly
experienced persons such as Governors and Housemasters of Borstal Institu-
tions do not agree in their assessments of the chances of success of their cases.
Such classes of judgment are not therefore repeatable. Where differences
occur between subjective judgments it is safe only to use that portion of the
judgment about which agreement can be secured and to regard the remainder
as individual variation—or in statistical terms "error". The techniques we
have used give only such weights to subjective judgments as can be estimated
to be common ground for agreement.

VALIDITY

VI.17   Fourthly we require the tables to be useful and valid. Exact pre-
diction of the future behaviour of any individual is impossible, but the system
of prediction derived from experience tables has got to prove that it can
carry out the task of differentiating the likely successes from the likely
failures with reasonable validity. What level of validity should be regarded
as reasonable constitutes a major problem. In vocational guidance and edu-
cational selection the future of an individual is at stake as much as in crimino-
logical prediction. In these former fields statistical prediction tables (under
a different name but using precisely similar techniques as employed here)
have been accepted for many years. This is perhaps due mainly to the fact
that when groups of individuals to whom the test procedures have been applied
were compared with those selected by any other procedure, there was on
balance an advantage in the statistical methods. This gain over the subjec-
tive procedures was often slight, but it was considered sufficient to show that
standardised tests (prediction tables) did on average a better job than the
procedures normally used before their introduction. In vocational selection
quite often the newer test procedures are linked with the older system of
selection board and individual interview.

VI.18   People seem, however, to be more inclined to accept the judgment of
other people than to trust numerical procedures which appear abstract and

impersonal. It seems that if this prejudice is to be overcome we require the experience table procedures to be *more accurate* than other systems of making assessments. It would apparently be insufficient to show that the two systems were equally good. The statistical procedures might be cheaper to operate, but they would not be so acceptable. The degree of precision or validity of criminological prediction is then best judged by relative standards and not in absolute terms.

VI.19 In this study it seems that the statistical procedures are at least three times as efficient as the subjective judgments of Governors of the Institutions, and more accurate than a psychologist's prognosis.

VI.20 So far we have used the term "prediction" rather loosely, and now that the general concept is established we might perhaps be more precise and show how the criminological use of this term differs from others. It is noteworthy that Ohlin to whose work in this field we have referred earlier, prefers the term "experience tables" to "prediction tables". In any case it will be clear that "prediction tables" are in fact experience tables—there is no difference in their content but only in their use. Their use for prediction tacitly assumes that the experience of the past is a guide to the future. This, indeed is the basis also for subjective human judgment and we are more inclined to accept a judgment that is supported by extensive and intensive experience than one based on limited experience. The philosophy underlying the use of "experience" as "prediction" is thus commonly accepted. There is, however, one important difference which only very recent statistical theory[2] is beginning to take into account. The experience of living persons changes with time and the Borstal and other criminal populations also change with time. Thus subjective judgments are based on dynamic experience,[a] whilst the statistical model we have used in this study gives a static experience table. It becomes clear, therefore, that the experience tables, if they are to be valid as prediction tables will need revision. Good results will only be achieved whilst the experience on which they are based remains representative of the population to which they are applied. There are now available rigorous and highly efficient statistical methods for dealing with such dynamic situations, and a note will be given later showing how these might be applied in criminological prediction problems. In the meantime, let us attempt to assess how serious the effect of using a static model *without* revision is likely to be, if no major changes of policy cause a discrete break in the natural pattern of changes with time.

VI.21 Since 1988 the proportion of "successes" after Borstal training has not been subject to wide variation. This does not suggest anything about the future likely proportion of successes. Nevertheless, let us suppose that in a future year the "failures" were to drop to 85%, this might be due to two things, (a) the proportion with undesirable characteristics had decreased (i.e. the equation would make allowance for the change), or (b) the success rate had risen for all or some groups of "risk". For example, at the time of this study we know that "Group A" had a 7:1 chance of success; in the future hypothesised case we might experience the higher overall success rate, (a) because the proportion of people with experience fitting them for "Group A" was larger and those whose experience resulted in their being classed as D was smaller, or (b) because the success rate for experience group A had itself increased. If the latter case were true the prediction based on experience tables (and most likely also that based subjectively on experience)

would deteriorate, whilst in the former case no significant deterioration in the prediction from experience tables would result. Of course, such changes need not be independent, and both might occur together. Compensatory changes might also take place within the groups, so that a deterioration of prediction could take place without significant change in the overall success/failure rate.

VI.22   In view of the fact that the experiences we found to be prognostic of success have, in general, been found by others over many years in many different countries, there seems to be good ground for expecting prediction based on these factors to hold for a period long enough to be administratively useful. It does not appear that much is lost because this study is based on static experience so long as the need for revision is always considered.

VI.23   Strictly, then, our prediction tables do not predict—they tell us only what other factors help us to "specify" success or failure in this sample and what weight we should attach to each factor in order to maximise the efficiency of the specification. We cannot therefore state exactly the validity of the present system, but only the degree of its precision in specification.* We know, however, from other work that good specification provides good prediction, and the best prediction is obtained from the best specification.

PART II

THE PREDICTION TABLES

THE PROCEDURE ADOPTED

VI.24   The basic data from which we set out to build the experience tables included the material reported in Chapter V. Other similar tables were studied but have not been reported since they served only as an interim step towards the prediction and were of no special interest in themselves. Every factor for which information was available in about 80% of the cases was analysed by the criterion of success or failure. Two other criteria were also brought in later. The three criteria were: (A) Success or failure as defined (para. III.2). (B) Degree of "failure". (C) Degree of "success".

VI.25   We have previously referred only very briefly in passing to criteria B or C and the purpose served by their inclusion will not be obvious until we have followed through the simple prediction of the first (A) criterion. It is, however, convenient to define these two criteria now so that the later argument will be seen in its setting.

DEGREE OF FAILURE

VI.26   This criterion was defined as the number of crimes the youth had committed after his first release from Borstal. If his licence was revoked for an indictable offence, this fact would count as one crime, if, after release from the recall centre he was again convicted for an indictable offence, this would count as two crimes. Similarly for all such further crimes. No crimes after conviction were treated as a score of zero on this scale.

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* This remains true after a "validation study". A "validation study" merely provides an estimate of the validity at other points in time. The validation study helps to suggest the level of confidence we may place in the prediction, but it is not a "proof" of the predictive value of the tables when applied to periods of time other than those used in the original study and the validation study.

DEGREE OF SUCCESS

VI.27 This criterion was required to reflect the attempt which the lad had made to settle down in life. No direct objective measure of this was, of course, available, nor was there any reliable and readily available subjective assessment although one could doubtless have been obtained. For our limited purposes it was considered to be sufficient to take the period between release and first reconviction as some indication of the attempt at resettlement.

FIRST STAGE

VI.28 Our first step was to analyse every factor by the first criterion. We thus have a large number of tables showing the relationship between various factors and our criterion. We subsequently selected the more important factors and correlated these with information on post release behaviour which we treat as the criteria to be specified or "predicted". The ten factors which had the best degree of association with the base criterion (A) are given in rank order below together with the coefficient of association and $r\phi$ correlated to give figures comparable with the correlation coefficient of Pearson (product moment). Those marked with a * are available before committal to a Borstal Institution.

TABLE 80

Summary of main factors correlations†

Factors	T	$r\phi$
* Total number of convictions	0·23	0·31
Job changes during licence	0·21	0·39
* Whether ever at Home Office School	0·21	0·31
* Longest period in any one job	0·19	0·25
* Average duration of jobs	0·17	0·22
Number of misdemeanors in Borstal	0·16	0·24
* Number of convictions resulting in fines	0·16	0·24
* Whether evidence of drunkenness	0·16	0·25
* Who the boy was living with	0·16	0·21
* Age at first finding of guilt	0·15	0·19

† For definition see Appendix II.

These are associations which statisticians refer to as being of "zero order". They are simple direct comparisons between two facts—one the criterion and the other the "factor" which we might use as an aid to predicting the former.

VI.29 So far our procedure has been very similar to that of Glueck, Burgess, Ohlin and others whose work we have briefly noted earlier. It is in the way in which we seek to combine these basic zero order data into an efficient prediction equation that we take a new line—new that is in criminological prediction. The Gluecks in '500 Criminal Careers' took the six factors which had the highest zero order correlation and added together the probabilities as indicated by the percentages in the several categories. We have said that this method does not take account of any overlap of the factors and that this is essentially inefficient. In later studies the Gluecks rejected those factors which they considered overlapped, and this too was an inefficient statistical procedure because not all of the factor might overlap—or in statistical terms some of the variance might have been independent in the two factors and this could have contributed to an explanation of a criterion.

VI.L2   Since we had in all, 60 zero order correlations we should have needed to calculate a total of over 1,200 correlation coefficients if we were to examine the overlap of each of these with each other. Whilst this task in itself would have been formidable and well outside the budget which was available for the complete project, these calculations would have been only the first stage and the later calculations would have been almost impossible. We, therefore, had to make an initial selection of factors and to study only those which were judged likely to be of value in the final prediction equation if overlap were small. If the overlap were large, then these factors would be rejected by the statistical procedures at a later stage.

VI.L1   We had, therefore, to assess the *a priori* probability that a factor might emerge of value. We concluded that the zero order correlations were a means of facilitating our judgment regarding this probability. Accordingly we did not include in our study of overlapping any factor where the zero order correlation was likely to occur by chance.[8] Rejecting any further consideration of factors where the zero order correlation could reasonably have been due to chance we were left with a manageable problem. Factors where the information was not regarded as basically very reliable or where data were often missing were also rejected.

VI.L2   Our next stage was to identify those cases from our original 720 cases where all the selected factors were known in respect of every case. We did not regard it as valid to use data so and when it was available in this procedure. This requirement reduced the sample to 885 cases. This represents in this field before us. We know that this residual sample was biassed in that it contained 221 successes and 164 failures—a success rate of 57·5 as against 45% for the total sample. The availability of information was itself correlated positively with chances of success. This fact does not seem likely to make our results seem better than they are, but might work in the other direction. Those amongst whom we seek to differentiate success and failure are, in the very fact that we can make the attempt, a more homogeneous sample than the total sample.

VI.L3   A process of "weeding" out those factors which did not contribute to the specification of our criteria because they overlapped with other factors then began.[9] First a "matrix" (a table showing the overlap of each factor with each other and each with the criteria) was built up, and the equation solved using all factors of significance which were included. The equation yields some terms which if they were omitted would not materially (significantly) reduce the degree of precision with which we could specify our criteria. For example, in the first matrix we included both "average duration of jobs" and "longest period in any one job". Clearly these two factors overlap. There is some preference on administrative ground for the latter—it is simpler and may perhaps be more accurately determined. If then we can derive specification precision using only the latter (longest period) which is equal to that (or differs only insignificantly from that) using only the former (average duration), preference will be given to the retention of the latter. If however, there is some unique element which contributes to our precision of prediction we would obtain the weights for these two items which gave the best estimate. As might be expected, although the overlap was not complete, (r=0·70) for this purpose.

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* The 2½% level of chance was taken from this purpose.

precision of two factors (as compared with the one) did not qualify both for retention. The two together added nothing to our knowledge of the likely success or failure of the individual, which was not already known from one. VI.34 Every other factor was treated in a similar way. To give another example. In the first matrix we studied both "age at first crime" and "age at first finding of guilt": the overlap was considerable as indicated by the product moment correlation of 0·88. We could, therefore, obtain much the same precision of specification with either, but we should again not retain both. The reliability of the basic data suggested that preference should be given to "age at first finding of guilt", and again the precision of the equation was not significantly diminished by the choice of this more reliable factor in preference to "age at first (recorded) crime". At a later stage in the procedure even this factor ceased to have any real significance when a number of specific experiences in the lad's record of past punishments were given optimum weightings.

VI.35 This process of studying all items which were likely to have some contribution to make to the precision of specifications and then of rejecting all items which were sufficiently taken into account by other items was done separately for factors known before conviction and for factors known during Borstal training. Preference was always given to the simpler of two items which competed for inclusion on other grounds.

DISCRIMINATION—THE PREDICTION EQUATIONS

VI.36 The equation which derived from this process of simplification, and the method of calculating the "score" for other cases is shown below:

For every factor which applies, count the number shown against the item. Add together. Result is base score. To convert score into probability of success refer to graph given as Chart III on page 147.

FACTOR	ADD
If evidence of drunkenness	24
If any prior offence(s) resulted in fine	9
If any prior offence(s) resulted in committal to prison or to Approved School	8
If any prior offence(s) resulted in a term on probation	4
If *not* living with parent or parents	7·5
If home is in industrial area*	8
If longest period in any one job was:	
Less than 1 month	11·7
Over 4 weeks up to 6 weeks	10·4
„ 6 „ „ 8 „	9·1
„ 2 months „ 3 months	7·8
„ 3 „ „ 6 „	6·5
„ 4 „ „ 6 „	5·2
„ 6 „ „ 9 „	3·9
„ 9 „ „ 12 „	2·6
„ 12 „ „ 18 „	1·3
„ 18 months	0

* Any town where the ratio of the rateable value of industrial to total hereditaments exceeded 0·009.

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VI.87 Perhaps it should again be emphasised that these factors are not suggestive of causes in any way. Nor, of course, can they be applied to any other form of treatment than Borstal training. The fact that a lad had, say,

> been fined
> been on probation
> been to an Approved School

in the past, means that he has been convicted at least four times and that at least three other treatments than Borstal had been tried and failed. We might achieve the same degree of specification of success and failure if we had not taken the treatments but the factors which these treatments reflect. It would, however, have been more difficult and less reliable to define the sorts of crimes which resulted in fining, or probation and the type of record which led to Approved School. It was more convenient to use the observed results of the crimes in the past. Again, the fact that probation had less weight than, say, fining does not mean that probation was a better treatment and less prognostic of failure. All the things which go together (e.g. the crime, the past record, the age of the young person, perhaps the home background and the like) to result in probation being awarded are counted in the one observed, definable and objective fact. Perhaps for this reason "home conditions" are not found to be prognostic—the variation may have been already accounted for in the types of treatment and the weights that different treatments receive in the equations.

VI.88 The application of this equation to the 385 lads resulted in the following distribution of scores and specification efficiency:

TABLE 81

The failure score analysed by success and failure

Score	Successes	Failures	Total	% successful
A 0·0–9·9	47	7	54	87
B 10·0–14·9	46	24	72	67
C 15·0–23·9	96	65	161	60
D 24·0–39·9	26	54	82	34
40·0 and over	2	14	16	13
	231	164	385	57

$$r\phi = 0·46$$

VI.89 Unfortunately, we cannot compare this with the similar table in "500 Criminal Careers" because of two facts (a) "500 Criminal Careers" quotes a mean square contingency of 0·46 based on three categories of criterion whilst we have only two, and, (b) we cannot derive the numbers upon which the corresponding table is based since only percentages to differing bases are quoted.

VI.40 Since we do not know the distribution of the "scores" for the *whole* sample, the cutting points for the risk categories and the numbers falling into each are somewhat arbitrary.* We know, however, that we had more of the

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* The procedure was to isolate the centre group first—cases where the specification was less than 2:1 or 1:2.

better "risks" in the sub-sample for whom information was available, we therefore fixed the risk categories and allowed the numbers to vary in the above presentation of the results. The estimate of the likelihood of failure of any individual is, of course, specifiable in terms of his actual score, since the risk of failure is a continuum. To illustrate this we give in Chart III the estimate of risk for each score unit.

Chart III

Graph showing scores and estimated probability (P) for all cases, and mean scores for five risk groups

Mean score of five risk categories denoted by A B X C D

VI.41 In order to demonstrate that the cutting points make little or no difference to the value of the specification, we shall give some examples later.

THE EFFECT OF THE PERIOD OF EXPOSURE TO RISK OF FURTHER CRIME

VI.42 We have already presented some arguments to the effect that the period of exposure to risk was not likely to have a serious effect upon the

discriminating power of the prediction tables. We anticipate, however, that some slackenings may suggest that our period of follow-up (exposure to risk) was 'very short.'* It will be remembered that by the time we closed the records, 45% had been further convicted, and our defence for the relatively short period of our follow-up compared with other studies of like nature in the past, was that the proportion of failures was unlikely to increase much above this figure even for very much longer periods of exposure. There is evidence of this expectation both in the shape of the curve which (Chart II) shows the arisings of fresh failures in this study and from the official reports of the Prison Commissioners (1951). Making use of several known curves for failure against time, we may suggest that no more than a further 10% would fail in the next 7 years.† Thereafter the failures arising would be almost zero. Thus we may assume that after the period of exposure to risk which we allowed we should have 80% of the total failures correctly assigned to the failure category. The longer the period of follow-up the more nearly does the number of failures observed agree with the eventual number of failures. But the more we gain in this respect, the more we lose in that experience is becoming out of date. The building of experience tables for prediction must therefore be a compromise in this respect, by defining the prediction as a prediction of failure within a period of time. In this study the "time" was an average period, but a fixed period was used for the validation study.

VI.43 The problem of time affecting the efficiency of prediction once tables are made can be covered by a continuous check on the continuing validity of the tables, but the problem of the optimum period of follow-up may need some clarification.

VI.44 In our study we built upon our experience and prediction tables in the following way. We had a matrix of information relating to 1946–7 with a criterion relating to 1951, thus:

Information 1946–7	Success or failure	Criterion—1951

VI.45 Our procedure was to solve the equations thus obtained giving our discriminant solution or our estimates of probabilities of success or failure in the following form

$$y = ax_1 + bx_2 + cx_3 \quad \ldots \ldots \ldots \ldots \ldots \quad (1)$$

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* We would have preferred to base our calculations in this field on the actual period crime free, i.e. from release to the time at which the first known crime was committed. Unfortunately, we could not economically obtain these data and we have instead the period from release to reconviction which will in general be some time after the offence. Some confounding is also present since the less serious offences constituting failure will be dealt with summarily whilst others will require a remand for trial.

† See also Chapter I.

VL46 It would have been a simple matter to have solved further sets of equations for differing periods of exposure to risk, thus, for example

Information 1946–7	Success or Failure	Criterion—Not committed further crime three months after release

VL47 We could solve the above equations thus deriving a best estimate for predicting return to crime within 3 months. We would, similarly, substitute any period from, say, one month up to the maximum period of exposure. Each solution would yield a prediction equation of the same form as we have in fact derived

$$y = ax_1 + bx_2 + cx_3 \quad . \quad . \quad . \quad \text{(say for 3 months of exposure)}$$
$$y' = a'x_1 + b'x_2 + c'x_3 \quad . \quad . \quad \text{(say for 6 months' exposure)}$$
$$y'' = a''x_1 + b''x_2 + c''x_3 \quad . \quad . \quad \text{(say for 9 months' exposure)}$$
&c.

VL48 If, as a result of this study, we found that the coefficients a, b, c . . . . tended to stabilise at a certain point, we could assume that beyond this would be little point in a follow-up study extending beyond this period. The solution of equations of this sort, although straightforward, would have exceeded our budget* and we had to find an approximation. Accordingly, using the weights (a, b, c . . .) for the final equation (based on average exposure of $3\frac{1}{2}$ years) we worked out how well *these same* weights would have predicted failure at earlier periods of time.‡ The results are shown on Chart IV. It will be seen that the slope of the line (the precision of specification) has increased from the line showing 6 months' exposure time to one year's exposure time, but that after one year of follow-up, up to the full period available, no further change of slope was significant in this study.† It is interesting to note that between 12 months (release to reconviction) and the full follow-up period (lines (2) and (3) on the Graph) the failure rate increased from 25%‡ to 43%, or in other words, line (2) was obtained with little over half of the failures available for line (3). If such a large change in the proportion of failures did not affect the prediction table in any way, then it seems unlikely that a further

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* This discussion is simplified by omitting any consideration of the solution for attributes and the solution for variables and subsequent combination which would be necessary, time consuming and expensive.

† The fact that the slope of the line increased considerably between 6 months' and 1 year's exposure to risk, may in some measure have been due to the effect of remanding the serious failures. In such cases the period of time from release to reconviction has been considerably less than 6 months since this period covered release to reconviction. A more refined measure of the period of exposure to risk might result in an even quicker convergence of the change of slope.

‡ These figures are based on the 368 cases entering into the construction of the prediction tables. In the whole sample 33% had failed within 1 year, and 55% by the end of the follow-up period.

eventual extra 10% could change its significance even to the smallest degree.
VI.40   By use of this technique it will be possible in future studies to determine
when the period of follow-up has been adequate.   This may be quite important
since it might be possible to construct experience tables upon up-to-date
experience, and not to have to wait for a long testing period to elapse first.
The total proportion of failures after the elapse of a required period of time
can be estimated independently of the prediction tables and the "origin" of
the prediction lines inserted accordingly.   Thus, in this study we could have
obtained our tables with a follow-up of 1 year, then, knowing (from official
statistics) that the failure rate at 3 years would be 1·70 times that observed at
1 year, we could have multiplied our average failure rate of 25% accordingly,
moved the line down (retaining the same slope) and derived the same line as
now appears as line 3.

Chart IV

*Graph showing scores and estimated probability of success (P) for differing
periods of exposure to risk*

VI.50 In brief, this means (a) that by three or four years after release, about 80% of those who will *ever* fail will have failed, (b) that after one year only half of the eventual failures will have failed, (c) that nevertheless experience tables based on 1 year's follow-up yield results in all respects similar to those based on 80% of the data. There seems to be ample evidence that whatever other defects this study might have, the "short" period of follow-up was not one.

VI.51 These findings are tentative because of the nature of the availability of the data. The tables were built upon data where the mean failure rate was not as high as in the total sample. As a by-product of the main purpose of these analyses by time, it would seem that this difference of means (although due to availability problems and to time differences) might not seriously affect the sorting out of the categories although perhaps the "real" line 3 would be moved down to a lower frequency of the whole sample were included. It seems highly unlikely that the slope (i.e. the precision of the specification equation) would be less if all cases could have been included.

VI.52 Further light on why this should be so is given by the analyses of the supplementary criteria and by the validation study.

SUPPLEMENTARY CRITERIA

VI.53 The way in which the concept of likelihood of failure and the probability of success inter-relate with the discrimination of successes from failures will be clear from the preceding examples. The limitation of the mere maximising of the number of correct classifications into the dichotomy "sheep and goats" for any period of exposure to risk lies mainly in that a wrong decision in one case may be more serious than in another, but we have already been able to introduce the idea of grading according to likelihood of failure in Charts III and IV. It will be clear from these charts that we may interpret any "score" as say, a likelihood x% of failure within 12 months and *also* at the same time a likelihood y% of failure within 2 years. It would be possible to make estimates of the probability of failure within the life time of the youth, but this seems to be unnecessary. If we grade the youths according to their likelihood of failure within 12 months, the same grading sorts into order the likelihood of failure within 8½ years. A score of 25 represents a 46% chance of success with 8½ years' exposure, and also a 68% chance of success for only 1 year's exposure, and similarly, *over most of the range of* scores we may add 18-20% chance for the increase in exposure from 1 year to 8½ years. We may thus derive a classification which is independent of the need to predict either success or failure within a specified time since it appears that after a fairly short follow-up period, we may merely add a constant to the likelihood of failure for all except the extreme cases.

V.15a For administrative purposes it is perhaps more often necessary to be able to say that A is "better" than B in a fairly general sort of way. It might be administratively undesirable to grade a youth as a good risk, because his risk of failure was small, if this small chance of failure related to the likelihood of committing a very serious crime. For example, suppose Smith and Jones to have a probability of success of 90% and 60% respectively, we may say that Smith is a better risk than Jones. Smith has a 10% chance of committing a further "crime" (whilst Jones has a 40% chance, and given that the seriousness of these future crimes was likely to be equal, our grading of Smith as "better" than Jones is justified. But suppose Smith was likely by his

crime to do four times the damage that Jones was, then the two should doubt-
less be graded as equal risks. Again, Jones may have a 40% chance of com-
mitting only one further crime, but Smith, once having fallen to the 10%
risk, may in future commit many more crimes.

VI.55   Fortunately these confusing elements do not occur in the Borstal
population, nor, it seems, in other continental populations. They are theoreti-
cally possible, however, and our supplementary criteria were included mainly
to provide evidence of what does in fact happen.

VI.56   In fact we have shown that, so far as the severity of the punishment
reflects the seriousness of the crime, the longer the period crime free, the
smaller the proportion of serious crimes (i.e. the heavier punishments). We
have also seen that the equations for prediction based on an average of 3½
year's exposure give almost equally good results for predicting success or
failure within one year.   But we may be interested in forecasting the likely
return to crime within shorter periods than 1 year and for this purpose a dif-
ferent set of information may be necessary to secure the best estimates.
Although these kinds of problems may be solved in the way already sug-
gested we may condense the time crime free into one criterion by valuing
different weights to different periods.   The weights we attach will affect our
solution, unless the objective is merely to attempt to predict a most likely
date for failure—an exercise which could hope for little success and would be
of still less use.   We explored the problem as to whether a different set of
information or different weights should be attached to our pre-Borstal informa-
tion by solving the following equation.

pre-Borstal information	Time crime free	Criterion—Period crime free weighted as shown below
		Weights given to time
		Not reconvicted 0
		Over 2 years 1
		1½–2 years 2
		1–1½ years 3
		9–12 months 4
		6–9 months 5
		4–6 months 6
		3–4 months 7
		2–3 months 8
		6–8 weeks 9
		up to 6 weeks 10

VI.57   By this means we are making some use of the fact that the longer a
youth stays out of trouble the less serious is any future trouble likely to be.
We found by solving these equations that if we wished to predict the time to
reconviction in the form above, the same prediction table as we used to predict
success or failure could be applied with the same weights to each factor, with a
result equally as good as that of predicting success or failure.   (In the statis-
tical result the two equations provided the same amount of "information.")
Our grading to the simple dichotomy serves to give a result which may be
generalised to some extent.   The exploration for a "general" measure of

grading might be continued in various ways, but only one further test was applied in this study. We considered that those who had committed a number of crimes and had been convicted more than once represented a worse risk and accordingly we took the number of crimes committed after discharge as a measure of the seriousness of failure. A similar equation was solved, thus

pre-Borstal information	No. of c r i m e s ← Criterion—Number of crimes committed after release

VI.58   Again the same prediction table as predicts success and failure predicts the number of crimes committed and provides the same amount of information. A different set of information was not required nor were different weights to the factors of any advantage.

VI.59   In both these supplementary criterion analyses the zero cases (successes) constitute a considerable weight, and a model which excluded them would be unrealistic for most purposes.

VI.60   It seems that these analyses are pointing to an interesting hypothesis. The probability of returning to crime which we predict originally and the two supplementary criteria may be seen as indicators of a "general factor" of "criminality". By estimating one, we automatically get also a good estimate of another. Or we may see an analogy with the medical state of general ill-health interacting with probabilities of contact with germs and viruses giving a differential probability for individuals to succumb to the ailments. Our prediction gives an indication of "general ill-health". Such a concept would permit of a reasonable explanation of "crime waves".[4]

VI.61   This explanation would soon take us too far on the basis of slender data. The analyses we have given do not enable us to make positive suggestions, but it seems that we are safe in accepting the negative aspects of our results. The illustrative cases of Jones and Smith and the chance of a small probability being a worse prognosis than a larger one mean that we were hypothesising a negative correlation between criteria. In fact our analysis has shown that far from being any negative correlation between criteria, the reverse is the case, indeed we have some grounds for suggesting that all reasonable criteria are in fact reflections of the same thing.

PREDICTING THE "UNPREDICTABLE"

VI.62   It will be noted in Table 56 above that we identified four categories as A B C and D, whilst we denoted the centre group about whom no useful prediction could be made as X. This centre group of "unpredictables" has been a problem in most criminological prediction. The majority of the weight in the first equation is clearly falling upon past criminal record. It seemed reasonable to suppose that a chance existed that this great weight of past criminal factors was saturating other factors of, say, a more personal nature. The centre group appeared here mainly because their crime record was similar

and their treatments in the past had taken similar courses. We noted, for example, that intelligence was not a significant factor in determination of success when these weightier factors were included. Now it appeared that once we had disposed of the weighty factors of past criminal record and treatment experiences, that personal factors might stand a chance of acting as differential indicators of success. This hypothesis proved strikingly correct.

VI.63 Our procedure was to isolate the centre half of the table and to start the process of building correlation matrices as for the first equation. This time we knew that there was no point in including factors which had been used and resulted only in this group of lads being classified as of average failure risk. The factors which had failed to appear in the first equation but for which the zero order correlation was significant were put back again for this group. The end result was that out of the centre group only 6 cases found where the information was available, of these 87 could be correctly predicted. The fact that we required more information about this group resulted in the total upon whom we could work being reduced from 161 to 54. This was a grave loss, especially as the proportion of successes was again higher—showing a continuing tendency for success and availability of data to tend to go together.

VI.64 The second equation reads as follows:

Columbian Test 60% or higher 2
Last occupation (labouring or unskilled) . . 2
Leisure activities of poor type 4
Family crime record 1½
Occupation of Head of Household
    (labouring or unskilled) . . . . −1

If score exceeds 4½ class as likely failure.

VI.65 The distribution of results based on the 54 "unpredictable" cases for whom the data required were available is shown below:

TABLE 82

The supplementary score analysed by success and failure

Score	Success	Failure	Total
Less than 4½	25	7	32
More than 4½	10	12	22
	35	19	54

$\chi^2 = 5.85$ for 1 degree of freedom
P between 0·05–0·02

VI.66 It thus appears that 87 were correctly specified whilst 17 were incorrectly allocated. The value of χ^2 is significant at the 5% level and seems to suggest that development along these lines is possible. It is, therefore, interesting to speculate on the reasonableness and possible meaning of this result. It is convenient to examine this problem by thinking in terms of "typical cases". Let us suppose the cases have the same background of crime and are equal in respect of all the factors included in the first equation. If, then, a youth has an IQ which is above average but has been employed in a job with low social standing (labouring) then he is less likely to succeed than

if he had *either* a lower I.Q. or was employed at a higher level. This prognosis deteriorates further if his father was not employed in work of similar social standing to that of the lad. In order to shorten the description of some cases, let us indicate above average by a + and below average with a − sign. The worst prognosis is thus given by

	+	−	−	−	+	(Score=10½)
but	−	−	−	−	+	(Score=7½)
and	+	+	−	−	−	(Score=7½)

give the same result, as does also

	+	+	+	+	+	(Score=2)
and	−	+	+	+	−	(Score=2½)

This seems clearly to suggest that if the lad's intelligence and occupation are in line with each other and his employment of similar social status to that of his father, the level of these factors does not matter. It appears that it is the "conflict situation" which is emerging here.* Thus we have factors where the level matters, and factors where only the conflict matters, and doubtless factors where both the level and the "conflict situation" matter.

VI.67 The working of this two-stage system is quite simple. First the facts necessary for stage 1 are obtained and the addition sum carried out. If the score is less than 10 the lad may be put in risk class A, if less than 15 in risk class B, if more than 24 in class C or if more than 40 in class D, with approximate chances of success of 7:1, 2:1, 1:2 and 1:7 respectively. If his score lies between 15 and 24 we regard him as indeterminate at this stage and require more information. With this extra information we add the factor weights and finally classify the lad as, say XS or XF, where the risk classes are much less positively determined due to smaller sample numbers, but are approximately 1:8 and average respectively. The fact that the worst category is still "average", is due to the fact that the availability of the data upon which to base the equation gives the sample of cases upon which the specification could be tried, a greater than average chance of success. This exercise merely reveals that the additional data does split the centre group with useful differences in probability of success.

PREDICTION FROM FACTORS KNOWN DURING TRAINING

VI.68 It is possible that a prognosis might be required when a lad had undergone a part of all his training. Clearly such predictions may be based on those additional experience factors which become known only during training, and the prediction should therefore have more precision than one which does not utilise these data.

VI.69 We studied this problem and derived weightings for the further factors of significance. The prediction formula reads as follows:

Original score number	. . x
For each absconding add	2
For each misdemeanour add	1
If sent to "open" Borstal deduct .	4
Resultant score	

VI.70 If we ignore the splitting of the centre group of cases to our first score and operate the equation shown above, we find that we can specify success or failure as follows:

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* This point seems strongly to support the theory of 'normality constellations' due to G. W. Lynch (see pp. 176, 209).

TABLE 83

Estimates of success or failure based on facts known before and during Borstal training

Score	Success	Failure	Total	% Success
Up to 9	65	10	75	87
10 to 17	68	28	96	71
18 to 27	64	63	127	50
28 to 41	22	49	71	31
42 or more	2	14	16	13
	221	164	385	57·5

$r\hat{6}=0.50$

VI.71   The cutting points for these groups are, of course, again arbitrary, although we have kept the probabilities of success or failure for the groups fairly similar to those of Table 81. By this means the slight gain in prediction is seen by the increased numbers of cases which appear in the best risk group. To demonstrate that the cutting points make little or no difference to the precision of prediction, but may be adjusted to give numbers suitable for decision purposes, we have held the numbers constant (or as nearly so as possible to whole unit scores) and allowed the probabilities to vary with the results shown in Table 90.

TABLE 84

Estimates of success or failure based on facts known before and during Borstal training

(alternative presentation)

Score total	Success	Failure	Total	% Success
Up to 8	61	10	71	86
9–15	53	23	76	70
16–22	52	31	83	63
23–28	35	44	79	44
29 or more	20	56	76	26
	221	164	385	57·5

VI.72   It is known, however, that the worst risks were missing from the sample upon which this result could be calculated. It seems certain therefore that had scores been possible for all the cases (i.e. representative group of Borstal boys) there would have been many more in the higher score groups. From Table 15, for example, we know that there were 281 cases with Approved School records, but included in the material on which the prediction tables were based were only 143 cases. In the full sample we had 45% success, and 41% with Approved School backgrounds, in the sample which we could use for prediction table building we had 59% success and 37% with Approved School background. Thus in the sample used for the tables we had a heavy bias towards success and an indication of a bias towards lower scores.

VI.73   We cannot be certain how the *distribution* of scores would appear in a fully representative sample of Borstal boys, but unless we assume some most

improbable complex interactions, the score and the probabilities should remain of almost constant relationship if we included the full sample. There is, however, an element of doubt wherever data are missing. In earlier studies the proportion of data lost has been even higher than in this study, yet the predictions have withstood practical tests. Indeed the authors of most earlier works have not been very worried about loss of information and have often not required the configuration of data they used to be applicable to the same cases.

VI.74 We consider that this study has conclusively shown that specification of likely success and likely failure is possible and that the precision achieved was greater than subjective assessment. Research along the lines indicated in this study seems to promise administratively useful results in the future. We have not tried to suggest "causes" and not perhaps to do "research" but to provide formulae which will help in the making of decisions. Decisions have to be made, and the aids which scientific analysis can provide are, we believe, likely to be of great help.

CONCLUSIONS

VI.75 In the present case the simple methods which we have used (sorting the cases into two definitely definable groups, those with and those without further convictions) give the same prognosis tables as if we had tried to predict the degree of success or the degree of failure, so far as we have been able to obtain measurements of these two more difficult and more nebulous concepts. In this particular case, then, there has been no real need to concern ourselves with some of the problems which arise from the simple theory, but this sort of result cannot always be expected, and may in part be due to the indefinite nature of the subsidiary criteria.

VI.76 In the present case it is sensible to talk of, and to regard for purposes of decisions about the lads, the Group A's as better than the Group B's, and similarly the Group D's as worse than the Group C's, although the former would to our simple model both be regarded as successes and the latter as failures. Not only can we say that the A's are more likely to succeed, but that they are more likely to be more successful than the B's, and we may also say that the D's are more likely to fail than the C's, and more likely to fail badly. Since we have compared the "500" with the current work, it is only fair to state that this finding of ours reflects also on this earlier work and suggests that a similar result might have been derived by the Gluecks if their supplementary criteria had been similar, indeed their use of two categories of failure provides further evidence of the reasonableness of our result. The essential difference is in that our supplementary criteria were continuous variables, whilst theirs was a sub-classification. Tendency to crime thus seems to be a matter of degree—a continuum. The importance of this result is in that we may distinguish within groups as well as between groups categories of risk. Given, for example, any number of cases, they might not only be grouped, but could be arranged in rank order of score, and this rank order would be meaningful in terms of degree of success or failure as well as probability of success or failure. The sole purpose of the division into groups A, B, X, C, D, was to enable the centre group about whom no discriminatory statement could be made, to be examined further. In any future study it would be profitable to look first for the hypothesised two dimensions and to modify the methods of

obtaining the equations accordingly. We should look for the personal factors likely to make for success and the experience factors, and deal with these together, rather than operate first on the one, and then divide up the centre group. Lack of data about leisure and other such personal behaviour prevented this being done in this study.

SUMMARY TO CHAPTER VI

S.VI.1 Prediction systems must be simple, efficient, repeatable and valid. The system we adopted was a mathematical one. The data were treated as a set of equations which were solved, so that we refer to the results as a specification equation which may be used for prediction.

S.VI.2 Besides the criterion of success/failure with its attendant task of sorting the "sheep" from the "goats" with every case defined as either a "sheep" or a "goat", we introduced further criteria which aimed at being measures of "sheepishness" or "goatishness". The same system of equations was found to hold for both the dichotomous task and the task of grading, and the weights for the individual items were almost identical.

S.VI.3 Only 385 cases of the original sample of 720 were used to build the prediction equations. This was because all the factors we needed were known for these cases. We did not consider it to be satisfactory to use information as and when it was available.

S.VI.4 The factors which emerged from the equations after a process of selection for ease of use where alternatives gave the same information (e.g. "probation" rather than early age of first conviction, etc.), are as follows:

FACTOR	ADD
For every factor which applies, count the number shown against the item. Add together. Result is basic score. To convert score into probability of success refer to GRAPH given as Chart III on page 147.	
If evidence of drunkenness	24
If any prior offence(s) resulted in fine	9
If any prior offence(s) resulted in committal to prison or to Approved School	8
If any prior offence(s) resulted in a term on probation	4
If *not* living with parents or parents	7·5
If home is in industrial area*	8
If longest period in any one job was:	
Less than 1 month	11·7
Over 4 weeks up to 6 weeks	10·4
,, 6 ,, ,, 8 ,,	9·1
,, 2 months ,, months	7·8
,, 3 ,, ,, 4 ,,	6·5
,, 4 ,, ,, 6 ,,	5·2
,, 6 ,, ,, 9 ,,	3·9
,, 9 ,, ,, 12 ,,	2·6
,, 1 year ,, 18 ,,	1·3
,, 18 months	0

* Any town where the ratio of the rateable value of industrial to total hereditaments exceeded 0·009.

S.VI.5 In the sample it was found that score groups (based on the above) factors resulted in the following risk categories:

Score		No. of cases
0–9·9	7 out of 8 cases successful	54
10–14·9	2 out of 3 cases successful	72
15–23·9	About average chances	161
24–39·9	1 out of 3 cases successful	82
40 and over	1 out of 8 cases successful	16
		385

$$r\phi = 0.48$$

S.VI.6 It appeared that a further analysis of the centre group of cases could split these also into "sheep and goats" categories.

S.VI.7 If behaviour in Borstal were included in the information available for prediction, these factors might be included thus:

Original score number x

Add 2 for each absconding (recorded)

„ 1 for each misdemeanour (recorded)

Subtract 4 if sent to "open" Borstal.

S.VI.8 The score categories for both equations resulted in the following distribution of cases for this sample:

Score category	Risk category	% successful	No. of cases
Up to 9	7 out of 8	88	74
10–17	2 out of 3	71	95
18–27	Equal	50	130
28–41	1 out of 3	31	70
42 or more	1 out of 8	13	16
			385

$$r\phi = 0.50$$

S.VI.9 The slight gain in specification is seen from the fact that $r\phi$ rose to 0·50 from 0·48 and from the fact that the best category now contained 74 cases instead of 54. The cutting points were of course arbitrary. When we adopted the procedure of requiring each class to be as nearly as possible equal in number, the result was

Score group	% successful	No. of cases
Up to 8	86	71
9–15	70	76
16–22	63	83
23–28	43	79
29 or more	28	76
		385

S.VI.10 It is known that the worst risks were missing from the sample upon which the specification was calculated, and it was likely that had scores been available for the whole sample greater numbers would have been found with high scores. The cutting points selected for use in practice will depend on the decisions to be taken. If we are to separate the youths into "sheep" and "goats" and to leave the centre group unclassified (130 cases from table S.VI.8)

then to this simple division we should classify correctly 194 cases and incorrectly 61 if we decided that those whose score was below 18 were "sheep" and those with a score of 28 or more were "goats". We should thus be right in 77% of the cases. The concept of right or wrong classification is admissible here because only two decisions and an undetermined class are permitted. This result would be 33% better than chance and may be compared with 33% better than chance if all were classified by S.VI.9. This 33% may be compared with 12% improvement on chance which was shown by interpretation of the Governors' or Housemasters' prognoses.* It is claimed that this study proved specification to be possible. It remains now to test this result on a different sample at a different time.

S.VI.11 The problem of the optimum period of testing has been examined in some detail and a mathematical method by which it is possible to identify when the period of follow-up is adequate has been put forward. Applying a shorter version of the proposed methods to this study, it seemed that 1 year's exposure to risk of further crime was adequate to ensure no real changes in the experience tables. Only a change in the mean (or total) failure rate occurred after 1 year but this did not affect the power of the discrimination. It was thus seen to be possible to estimate the likelihood of failure for any defined period of exposure. This examination also clarified any difficulties which might be suggested to arise from our criterion relating to a fixed date (an average of 8⅓ years), and not to a fixed period of exposure.

S.VI.12 Supplementary criteria which attempt to reflect the degree of failure, were shown to be correlated and no problems arise from the suggestion that a smaller probability of failure may be a worse risk because the smaller probability was associated with a worse failure.

<div align="center">* See p. 170.</div>

REFERENCES TO CHAPTER VI

(1) A. J. Reiss, "The Accuracy, Efficiency and Validity of a Prediction Instrument", Amer. J. Social, 1950–1, 56, 552–61.

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(5) J. Fothergill and L. T. Wilkins, Paper given to a School in Sample Survey Techniques, held by the Association of Incorporated Statisticians. To be published by the Association in 1955.

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CHAPTER VII

Precision and Validation

VII.1   We have shown that for the sample of Borstal intake representative of all youths entering Borstal training during the period August 1946 to July 1947 we may express the precision of predictions by the coefficient of contingency (rϕ) with values of 0·46 and 0·50.   In the former case (0·46) we used only factors known before committal to a Borstal and in the latter (0·50) included also factors which became known during Borstal training.   These specifications are not "predictions" but rather a systematizing of "experience".   We need to show what would have happened if this "experience" had, in fact, been used as a later date for prediction purposes.   The basic work on the building of experience tables was completed in 1952 and the draft report was prepared but the publication was held back until a validation study could be made.   This was completed at the end of 1953, and this chapter was written at that date.   The original draft has been left as written earlier so that no interaction could occur after the results of the validation were known. The original report was withheld mainly because the loss of information gave good cause for scepticism about what might happen if the experience based on a sub-sample were used to predict a complete population.   We had demonstrated that prediction was possible to a level of precision likely to be useful both in research and in administration, but we were unable to state with any confidence that the equations (experience tables) could be expected to work satisfactorily on a later sample which was complete.

VII.2   The gain of 0·04 between the coefficient based only on pre-Borstal information (0·46) and on information up to the date of release (0·50) was trivial, especially in view of the greater utility of the former.   We sought, therefore, to validate only the pre-Borstal experience tables.   The latest date of entry to Borstal in the original sample was 31st July, 1947.   We accordingly allowed one complete year as the time interval between the "experience" sample and the validation sample by taking the entrants from July 1948 to December 1948 for the prediction tests.   We considered it to be desirable to test the prediction on a complete census* rather than on a sample since this simulated more closely what, in fact, would have happened if the tables had been used in practice.   It was also likely that in practice one of the two Reception Centres would "try out" the system of prediction first and this, too, was simulated.   The complete intake of the Latchmere House Reception Centre was subjected to the validation necessary to test the first experience table.   Only information necessary for the calculations was obtained, together with information on subsequent success or failure.

VALIDATION TESTING TIME

VII.3   In the original sample the period of follow-up was variable and although we have shown that this was not able to affect the results except in a trivial sense, it made the evidence confused to some readers.   Accordingly,

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* A "census" in this case may more correctly be thought of as a "sample in time" rather than a numerically or space based sample.

in the validation sample we have kept to fixed periods. For the failure cases
in the validation study the period crime free ranged from zero to 41 months.
For the successes the period crime free of which we had information ranged
from 36 months to 81 months.   Since there was some chance that the youth
who had had 36 months crime free might fail during the 37th month, we cut the
period of follow-up at 36 months.   This meant that 2 failures who were suc-
cesses at 36 months were accordingly reclassified.   The reclassifications were
due to one case who failed at 38 months and another at 41 months.

VII.4   The overall success rate for the validation sample was 49%, allowing
a period of follow-up of 3 years (fixed).   This compares with a failure rate of
43%, in the original sample for an *average* period of 3½ years.   But the pre-
diction tables were based on a sample which was selected because the data
were available for all factors, and as a result we lost 47% of the original sample
and our success rate for the base of the prediction was 57·5%.   The sample
upon which the tables were based was not, therefore, representative, having
too high a success rate.   Very considerable effort was necessary and much
time was needed to ensure that the validation sample no case was lost.
This meant contacting the Governors of the lad's institution requesting the
information relating to the "longest period in any one job". All other
information was available centrally, but this item had a quite important
weight and could not be ignored.   Only one case from the 339 who entered
Latchmere House in the period chosen was eventually lost.   Since the
original sample was biased it was unlikely that the validation sample would
agree exactly.   Differences between the original and the validation sample
may thus be due to:

(a) An improvement in the overall success rate for all categories, or some
only.

(b) The selection due to availability of data and bias in the base sample.

VII.5   If these facts could be sorted out, that is if the original sample had
been complete or representative, we could have obtained much valuable data
in addition to a general validation of the tables.   We could, for example, have
made some statements about the likely reasons for the change in the success
rate.   It is clear that the 4% improvement could not be due to the slight
difference to the exposure to risk alone, but we cannot say whether it was due
to an overall improvement in the "material" or in better treatment, even if
we made no assumptions about variations of a random nature.   The dif-
ferences cannot be explained because the original sample was incomplete and
we knew nothing about the score and results for about half of the cases.   If
we were to make estimates of a statistical nature such as reducing the two
success rates to equality, we should by so doing change the "exposure to
risk" time underlying the tables.   The original sample upon which the
prediction tables were based did not have a better success rate because the
"exposure to risk" was shorter, nor necessarily because they were "better
material", but because of factors outside our control, namely the availability
of data.   We know that availability was associated with success rate, but it
was not possible to find in what way.

VII.6   In future, however, recalculation of the tables based on samples at
different times will provide information of the type discussed and other data
of value in explaining any discrepancy in the success rates.   The need for a
complete (or fully representative) sample has been stressed throughout this

report and it is regretted that we were able to achieve this only for the valida-
tion sample. It will be appreciated, however, that since this was the first
study of its kind in this country it was not clear at first how this might be
achieved. Indeed, until we knew what information of value it would
have been most uneconomic to attempt a complete set of information for all
factors. Again, no difficulty would have been experienced if we had not
required information about employment.

VII.7   There are a number of ways in which the results of the validation
results may be compared with the original. We will limit our comparisons to
a few of the main results. The major classification developed was the classi-
fication into the groups A B X C and D, where X was regarded as unpredictable
because they failed to fall into a rich group having any real certainty of
prognosis. It was not possible to test our hypothesis that the "unpredictables"
may be predicted by taking two independent measurements. We first give as
Table 85 (below) the results of using *the original cutting points* for the groups
A B X C D for the validation sample.

TABLE 85
*Results when the original prediction table was applied to the validation
sample with each case having exactly 3 years' exposure to risk*

Category	Original			Validation		
	Success No.	Failure No.	Rate %	Success No.	Failure No.	Rate %
A	87	7	87 ⎱ 75	52	12	81 ⎱ 75
B	43	24	47 ⎰	33	18	68 ⎰
X	95	65	Unpredicted	38	76	Unpredicted
C	28	54	34 ⎱ 81	27	56	33 ⎱ 29
D	2	14	13 ⎰	7	9	0 ⎰
Total	221	164	57	167	171	49

$r\frac{1}{2}$=0·46 $r\frac{1}{2}$=0·48

VII.8   Thus, if we combine the two groups for which a prediction was made,
we derive the following comparison:

Category AB   Original—predicted risk (95/126)=75%.
               Validation—observed risk (90/120)=75%.

Category CD   Original—predicted risk (30/98)=31%.
               Validation—observed risk (27/92)=29%.

VII.9   It is quite clear from the above that there was no difference between
the predicted risk rate and the successes and failures observed in the validation
sample in respect of those cases for whom a prediction would have been made.
In the centre (unpredicted) group the position is very different. In the
original sample the centre group accounted for (161/385) 42% whilst for the
validation sample we observed (126/338) 37% in this "unpredicted" category.
Finally the centre group showed a success rate of 40% in the original sample
with 60% in the original sample. This difference could be accounted for by
differences within the group. We were, however, unable to carry out the

analysis of the centre group along the lines suggested in our original two-stage attack on prediction because the necessary data could not be obtained. We are not, therefore, able to say whether, if this approach had been possible, the difference would or would not have been resolved. Since no prediction was envisaged for the centre group, the tables may be considered fully validated.

VII.10 A further use for our validation study might be to examine the effect of different periods of exposure to risk. If we cut the follow-up to 2 years we find that between the second and third year there were 23 failures in the validation sample—a rate of just over ¼% per month on average for that period. We derive the following table if we use the same equation as was originally established on an average follow-up of 3½ years; with cutting points as before.

TABLE 86

Results when the original prediction table and cutting points was applied to the validation sample with only 2 years' exposure to risk for each case

Category	Success No.	Failure No.	Total No.	% Success
A	52	12	64	81 ⎫
B	41	15	56	73 ⎬ 78
X	63	63	126	50
C	32	51	83	39 ⎫
D	2	7	9	22 ⎬ 37
Total	190	148	338	56

VII.11 The bias in the success rates is now removed with the validation sample showing a rate of 56%, compared with the original sample (for the tables) of 57%. The bringing into line of the overall rates has, however, effected an exposure to risk period. The table shows, however, there is a good discrimination between the categories and the group which has changed most is the X "unpredicted" category.

VII.12 If we still further reduce the period of exposure to 9 months, again using the original cutting points, we derive the following table:

TABLE 87

Results when the original prediction table and cutting points was applied to the validation sample with only 9 months' exposure to risk

Category	Success No.	Failure No.	Total No.	% Success
A	55	9	64	86 ⎫
B	49	7	56	87 ⎬ 87
X	98	32	128	74
C	50	33	83	60 ⎫
D	8	6	9	33 ⎬ 58
Total	250	88	338	74

VII.13   Thus at 9 months the equation still retains an element of prediction and indicates that a system of testing which includes time is within the realm of possibility and likelihood. The number of cases failing is very small for groups A and B and the information contained in these cases is less than that of a similar number in the original sample. This is because in the validation study we were dealing with a complete intake, and not all individuals sampled represented a complete "degree of freedom". This will be clear when it is remembered that quite often lads are concerned together in crime and together sent to Borstal. These "two-case" entries will be correlated and some loss of information may result, for if one subsequently fails it is more likely that the other may also fail.

VII.14   The original cutting points were arbitrary except for the isolation of the centre group which was derived on the probability basis described earlier. We may not wish to use the scores derived from prediction tables to place the lads into categories but to arrange them in order of likely risk. The power of the prediction tables to achieve this ranking is, perhaps, best indicated by cutting the groups so that the numbers in each category are approximately equal. In the original tables we did this only for the factors which included both pre-Borstal factors and Borstal factors. For the full period of follow-up, the figures of Table 88 (below) are obtained by this means.

TABLE 88

Showing the result of applying the original prediction tables and then dividing the resulting distribution into five groups as equal as possible in size

Score	Success	Failure	Total	No success
0–11·9	56	12	68	82 ⎫ 74
12–15·9	42	23	65	65 ⎭
16–20·9	27	39	66	41
21–26·9	23	45	68	34 ⎫ 90
27 and over	19	52	71	27 ⎭
Total	167	171	338	

$$r\phi = 0.49$$

VII.15   Since such an arrangement allows for any change in the distribution of the scores, we may not compare directly with the original tables, but we may calculate the coefficient of $r\phi$. In the original table, which made use of the Borstal factors as well as pre-Borstal factors, we derived an $r\phi$ of 0·48 for a similar arrangement of the data, whilst the above table gives a similar $r\phi$ of 0·49.

COMPARISONS WITH EARLIER WORK

VII.16   Up to now we have used measures of association between one variable or factor and another, certain statistical systems which have in common only the property that they range from zero to unity, where zero indicates no association between the factors and the criterion (or other factor or variable) to unity which represents complete agreement between the two items compared. We could compare the precision of our tables with that found by others by comparing these coefficients, but it might be of interest if we were to make our comparisons more simply and more directly.

VII.17   We may test the precision by the simple device of considering how many cases were correctly classified by our tables and how many might have been correctly classified by others in other studies.   We will first consider the efficiency of the Gluecks' predictions in "500 Criminal Careers" and compare them with our own in terms of the proportion of cases which would have been correctly predicted as becoming either successes or failures.   In attempting this simple comparison we meet with some slight difficulty due to differences in the population to be sorted into the two categories.   In the "500" (the previous work most similar to our own) there were found to be only 20% successes, whilst in our sample and in the population from which it was drawn there were 45% successes.   Thus, if it was decided to regard all the cases as failures and no sorting was attempted at all, only 20% would have been wrongly classified by the Gluecks, whilst a similar decision to treat all cases as likely failures would, in our case, result in 45% being wrongly classified.   Clearly we cannot directly compare the 20% wrongly classified with the 45% wrongly classified and conclude that the decision which resulted in only 20% wrong was a superior decision to that which resulted in 45% wrongly classified.   In this sense the decision was exactly the same.   In another sense it is a superior decision to regard all as failures where the success rate is as low as 20%, but how this is so will become clearer when we have taken our theory a bit further.

VII.18   The decision to treat all alike and to treat all as either successes or all failures is clearly challengeable.   We need another technique by which to test the efficiency of any system of sorting into the two groups—likely successes; likely failures.   Let us suppose that the sorting were being done by subjective judgments, and let us suppose that the basis for the subjective judgment was wrong.   Let it be assumed that the basis for the judgment had no relationship with the facts at all, doing neither harm nor good.   Let it also be supposed that the persons making these judgments are aware that the overall success proportion is, say, 20%, and that they make their judgments with this knowledge.   (We shall later consider what would happen if they made a wrong assessment of the overall probability of success.)   In such a case we can imagine a mathematical "model" of what would result from any such classification of criminals into likely successes and likely failures, and can say how many they would be expected to get wrong.*   We may suppose that there were placed into a "hat" 80 cards marked "likely success" (or for every 80 cards marked "likely failure", and that as the individual cases were considered (in random order) a ticket was drawn from the "hat" and the lad regarded as a success or a failure according to the lottery result.   Such a lottery system is exactly analogous with a subjective classification which is not, in fact, correlated with the eventual outcome.   (In this study, strikingly enough, broken homes would be such a factor.)   We require to know how many cases would be correctly sorted by this procedure.   Since the cases are considered in random order, the probability of any individual in the "500" study being a success is 20%; similarly, since there are 20 success cards in the hat, the probability of drawing a success is 20%.   By elementary probability theory, the probability of a success case being correctly classified is

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* The term "expected" here has an exact and technical meaning.   It is the proportion which they would get right if the number of cases sorted were very large.   The number actually obtained in practice tends rapidly towards that expected as the number classified increases.   The "expectation" is also the average of a number of trials, so that it forms a ood measure of efficiency.

thus $(20\% \times 20\%)$, and the probability of a failure case being correctly classified as $(80\% \times 80\%)$, and by addition, the total proportion expected to be correctly classified by a lottery system is in the "500" case, 68%. It will be noted that this is a worse result than that obtained by the decision to regard all classes as failures. Using the same model and substituting the figures from this study, we derive the expected number correctly classified by pure chance as $(45\% \times 45\%) + (55\% \times 55\%) = 50.5\%$, again a worse result than regarding all as failures where 55% would have been correctly classified. If, however, the population contained exactly 50% failures, then the expected number correctly classified by the lottery system would be $(50\% \times 50\%) + (50\% \times 50\%) = 50\%$, that is the lottery, or a decision to regard all as successes or to regard all as failures has the same result.

VII.19   In all these examples we have assumed that the right proportion of successes and failures were inserted into the "hat" before the lottery began. We shall now examine what happens if the correct proportion is not inserted, but in all other respects the classification is random or unrelated to factors which provide useful information.   This is analogous with the assessor making subjective judgments but having either an optimistic or a pessimistic view of the general situation—he either includes too many failures (pessimist) or too many successes (optimist) in his concept (hat).   This step is important from the philosophical point of view in relating the case or individual method to the statistical concept of probability.   We will not develop our argument, but leave its implication unstated, since there is no point in suggesting philosophical difficulties to those who do not concern themselves with their existence.   To those who have been worried by some of the points raised in our introductory statements on methods, the discussion which follows should provide the reconciling detail.

VII.20   Let us suppose that the assessor was dealing with the "500" (success rate 20%), but that he was optimistic and believed that the success rate would be, say, 40%.   He might not express this belief in these terms, but might, nevertheless, act as though this were his basic assumption.   Let us also suppose that in all other respects his action was unrelated to effective indicators of success or failure.   He would then get correctly classified only 55% of his cases $(20\% \times 40\%) + (60\% \times 80\%)$.   If, on the other hand, he were pessimistic and thought that the overall success rate would be, say, 10%, he would be right in 74% of the cases $(10\% \times 90\%) + (90\% \times 80\%)$.   In fact, the more pessimistic he became, the more he would get right until he reached the limit of absolute pessimism and regarded all as failures, and obtained 80% correct.   The same argument would apply equally in reverse for optimistic assessors where the success rate was 80%.   These specimen workings may be assumed as continued for all possible success rates, and for all possible assumptions of pessimism and optimism, and the result would be found to show optimists giving better results than pessimists where the success rate exceeded 50%, and pessimists giving better results than optimists where there were more failures than successes.   The results can be summarised in the phrase that the best result is obtained when the assessor assumes that all cases are as the majority are; when, in fact, he accepted the statistical concept of probability.

VII.21   This argument, whilst possibly unnecessary in many respects, and inadequate in still more, is essential if we are to compare the results of the "500" with the results of this study in terms of the number of cases correctly

classified by the experience tables. The ideal classifying system requires that 100% of cases are correctly classified—those regarded as likely failures will become failures and those who are classified as likely successes will all become successes. Since the different basic success rates give different proportions correct by chance, and different proportions correct on the basis of the simple decision to regard all cases as the majority, we need to modify slightly our concepts if we are to obtain valid comparisons to this criterion. We noted that by chance alone, in our case, 50·5% of the cases would be correctly classified, whilst in the "500" test 64% could be similarly correctly classified. We may make comparisons of the end results of the two studies by considering the distance to go to achieve complete accuracy of classification. In our case we require to classify correctly a further 49·5% above chance before we have achieved 100% correct classification. The Gluecks, on the other hand, require to classify correctly a further 36% to achieve complete specification. If we regard the difference between the chance classification and the required result of 100% correct classification as the "target distance", we may express this target distance as 100% and avoid the difficulty that in our case it is 49·5% and in the "500" it was 36%. We bring these two "distances" to the same base of "500" and may then compare the results of different classifications. For example, the decision to treat all alike as failures would result in the 20% success case in 80% correct as compared with 68% by chance, a difference of 12%. This additional 12%, when expressed as a percentage of the distance from target, becomes 87%. In our case a similar decision would result in a gain to the original scale of 4·8%, which when related to the distance from target, becomes 9%. Thus we derive a result in keeping with the intuitive assumption that the decision to treat all as failures is a "better" decision when the success rate is small (20%) than when it is large (45%). To make this point clear a graphical presentation of this reasoning is shown below.

TOTAL POPULATION WITH 20% SUCCESSES

A similar diagram may be drawn for the present study showing a greater "distance" as the target, and reducing this similarly to 100%.

TOTAL POPULATION WITH 45% SUCCESSES

100%

50·5% correct
by chance

55% assuming all
to be failures

chance ←————TARGET————→ ideal
(100%)

VII.22 Unfortunately, too, comparisons with the "500" are not possible except for some of the single tables. This is because the number bases for the percentages are not given for the final score group.* However, the final table (Table 112), which deals with factors known before entry into reformatory, provides the following analysis according to score groups:

Score group ("500")	% successes ("500")	
244–295	75	(regarded as successes)
296–345	85)	
346–395	26	regarded as failures
396 and over	6)	

Of these four score groups for decisions of the type we are now considering, only the first one would provide any information since the rest would all be regarded as likely failures because more than half have failed. How many cases were correctly predicted cannot be known. The coefficient of contingency quoted is 0·45 and since this must have been calculated on the numbers, we might perhaps get a rough idea of the power of discrimination of this final table by considering another table where the coefficient of contingency is similar but where the base numbers are given. Table 105 of the "500" is quoted as giving a contingency of 0·43. The proportion correctly classified by this table is 76%—or a worse result than regarding all as failures so far as this simple classification of cases is concerned. Table 108 gives a coefficient of 0·59 and the number of cases here correctly classified is 84% of the total. This is 4% better than the result of regarding all as failures, and

* Nor can the base numbers be derived for Table 112.

takes us 50% of the target distance from chance to 100% correct classification.

VII.23 From these notes it will be seen that the value of comparisons between prediction studies where the proportion of successes is small and studies where the proportion of successes is near the 50% mark are difficult to appreciate; other factors than "right" or "wrong" classification enter into the consideration. The results of an optimistic or pessimistic approach differ considerably and judgments which are essentially similar (regarding, for example, all as failures, or all as successes) give widely different effects. This became most clear when we noted that in our case the decision to treat all cases as failures took us 50% of the target distance towards 100% complete specification, whilst the decision to treat the "500" as all failures would result in 37% of the target distance being covered. Thus it will be seen that the sort of statistical methods used depends on the kind of decisions which will have to be made; whether, for example, we are concerned only with "right" or "wrong" prognoses or whether we can find value in degrees of "rightness" or "wrongness" of the prognosis. In our final chapter we shall say a few words about optimum statistical methods, where we are able to include a concept, not merely of the dichotomy right or wrong, but of the degree of value resulting from actions based on statistical decision theory. We might seek to maximise the "good" of any result by taking into account the risk of making a wrong decision and the ill-effects, or penalty, attaching to wrong decisions.

VII.24 Using this model we may compare a few items from this study and its validation:

Decision based on	Improvement on lottery		
	The original study	Validation study	"500 Criminal Careers"
	% of target	% of target	% of target
Chance (lottery)	0	0	0
Regarding all as failures	0	2	37
Governor's reports	12		
Housemaster's reports	12		
Categories A B X C D regarding X as failures	33	37	
Categories A B C D (omitting centre group)	50	33	See below
Equal number groups Borstal and pre-Borstal factors	38		
Equal number groups pre-Borstal factors only		38	

VII.25 Thus we derive predictions that take us from 33–38% of the target distance towards correct prediction of all cases into the two groups when the equations are applied to all cases. When the centre group is declared "unpredictable" we obtain predictions which take us up to 53% of the target distance. It will be clear from the fact that in "500 Criminal Careers" 37% of this distance would have been covered by regarding all as failures

(exactly the same figure as we derived from our first equation) that comparisons between the two studies are not simple or direct.

CONCLUSIONS

VII.26 Prediction tables derived from experience in the years 1946–7 have been found to predict the likelihood of success or failure for cases entering Borstal one year later. Cases falling near the centre of the range of scores were not satisfactorily predicted. This result was expected and in the original work a subsidiary prediction system was derived to deal with this problem, but no validation of the subsidiary prediction table was possible because the necessary data* were not obtainable.

VII.27 The validation of the prediction tables does not prove their value for any form of treatment other than Borstal, and changes may still take place with time. Continuing validity is not assured because it has been once demonstrated.

VII.28 How valuable this result proves to be it is not within our province at the moment to suggest. Eventually it will be possible for the Courts to know not only a lad's likely risk of failure if committed to Borstal, but to know also his risk for other possible treatments. It would then be possible for them to take into account in their adjudication the social needs related to justice and the likely therapeutic results, and to evaluate treatments accordingly. This is a development of the results we have already derived from a comparison of the "open" and "closed" types of institution and discussed in Chapter V.

VII.29 A risk category can also be a useful signpost for after-care work. A lad with a high risk is a challenge to the After-care Association. If they accept the challenge and find ways of making successes out of the most likely failures our knowledge of therapeutic procedures will be thereby increased.

VII.30 Other ways in which prediction procedures can be of assistance both in administration and in research designs will doubtless become apparent as we become accustomed to manipulating the techniques. The main problem now is not how to predict, but what to predict and what weight or value should be attached to one result as against another. If treatment A gives the best chance of success, it is almost certain it will have other attributes which need to be offset against this simple probability related only to therapy.

VII.31 The basic tools exist and ways of developing them are foreshadowed —the way from here is full of promise but there are many ways to choose from. The close collaboration between scientist and the administrator is now more essential than ever before.

SUMMARY OF CHAPTER SEVEN

S.VII.1 The "prediction tables" derived in the ways described in Chapter VI were not "predictions" but descriptions—systematic analyses of experience. Since these tables are to be used for prediction we needed to make an empirical test of what would have happened if these same experience tables had, in fact, been used for prediction purposes. This procedure is known as validation.

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* This refers, for example, to pre-Borstal leisure activities, father's occupation and the like.

S.VII.2 The validation sample was a complete intake to one Reception Centre (Latchmere House) in the last 6 months of 1948. A fixed period of exposure to risk of 3 years from discharge was allowed. Using the prediction tables derived from 1946–7 experience we obtained the following results:

Predicted risk categories A and B=75%.
    Observed result 90/120=75%.
Predicted risk categories C and D=81%.
    Observed result 27/90=29%.

S.VII.3 The "unpredicted" group differed considerably, but no two-stage prediction was possible. The overall success rate for the prediction (validation) study was 49% compared with 45% for the total original (experience) sample or 57% for the sample on which the tables were derived.

S.VII.4 The value of prediction tables depends upon the decisions which are to be made on the information derived from them. Their efficiency is also associated with the frequency of success in the population studied.

CHAPTER VIII

Individual Case Studies

GENERAL OBSERVATIONS

VIII.1   For many years it has been customary in criminological researches to make use of individual case histories. We are not referring to publications which have as their main contents the history of individual criminals, such as some of the well-known books by Clifford Shaw [1] or Robert Lindner's "Rebel without a Cause" [2] or Frederic Wertham's "Dark Legend" [3] ; or to Sir Leo Page's "The Young Lag", where 23 case histories are used, without any statistical or typological refinements, "to paint a composite picture". [4] Nor do we have in mind studies relying mainly on the use of personal documents of the kind discussed, among other writers, by Gordon W. Allport in his "The Use of Personal Documents in Psychological Science". [5]   Our reference is to researches dealing with criminological problems of a more general nature and applying statistical techniques to sociological or psychological data. Individual case histories have been presented, for example, by William Healy, [6] Cyril Burt, [7] Maud A. Merrill, [8] Powers and Witmer [9] in their researches into juvenile delinquency, and by the Gluecks in their follow-up and prediction studies referred to above. Erwin Frey [10] employs statistical mass-investigation, the more intensive observation of selected groups ("*Reihen-Untersuchung*") and individual case studies.

VIII.2   It may be pertinent to examine the objects of using individual case histories in researches of this nature. At the same time, we should like to make it clear that we are not dealing with the controversial problem of the respective merits of individual case studies and statistical techniques in its entirety. In our view, this is a problem which can be satisfactorily solved not in a general way but only in relation to specific scientific objects, and the solution may differ in accordance with the specific needs in question.

VIII.3   (1) There is, first of all, the object, on which there is general agreement, of using illustrative case histories to lend colour to the grey statistical picture, thereby making the presentation more interesting and impressive and also more easily understandable. This may be regarded as the original and most obvious idea in this field.

The case histories are either given in a special chapter, such as the one headed "A Sheaf of Lives" in "500 Criminal Cases", or scattered over the whole work as in Cyril Burt's "The Young Delinquent". In the former publication, the purpose is defined by the Gluecks as "to illustrate various points" and "to afford the reader a more realistic conception of the human beings we call criminal . . .". [11]

VIII.4   (2) The next step is to present case histories of different types of offenders, i.e. to illustrate not only human beings and their problems in a general way, but to show the differences between the various types. This object was mentioned by the Gluecks in "One Thousand Juvenile Delinquents", where it is also stated that such case histories might provide "further hints about the weaknesses of society's elaborate equipment for coping with

delinquency".[12] No attempt is made in that study to demonstrate the exact relation, or in fact any kind of relation, between an individual case and the statistical typology. In "Later Criminal Careers" it is stated to be the object of these case histories to show "the more subtle interrelationships of traits and forces involved in the evolution and devolution of criminal careers" and "the influences that release the forces of moral maturation and also what influences block this normal process of growth or maturation". A warning is given, however, that case studies should always be presented *after* the statistical analysis since otherwise the reader might gain a distorted impression and perhaps attribute reformation to forces which the statistical analysis shows to be of no basic importance.[12a]

VIII.5 In "Criminal Careers in Retrospect", where 9 case histories are given at some detail, the authors make it clear that these cases are not necessarily typical of the group of 510 offenders studied, but had been selected because they were identical with the cases described in the original study "500 Criminal Careers".[13]

In "500 Delinquent Women", full case histories of 11 women are presented which, the authors believe, "exemplify practically all the major problems of individual and social pathology". The various types are described not in relation to the statistical part of the study, but in impressionistic terms such as "victim of circumstance", "professional criminal", "black sheep", and so on. A cautious view is taken of these case histories which, the authors state, "though they suggest hypotheses, supply no reliable estimate of the extent and ramifications of the problems involved in delinquency. The statistical method brings us nearer to such a goal".[14]'

VIII.6 (3) From these quotations, it will become clear that, while the first of the two objects of including case histories in prediction studies has, as a rule, been achieved, this can hardly be claimed for the second object. The third, and in our view most important, object to which we now pass has so far not even been tackled. We regard it as the specific task of case histories presented in crime prediction studies

(a) to give concrete illustrations of the various score classes of success and failure as worked out in the statistical part of the enquiry, with particular emphasis on the variety of factors and the various combinations of factors which may produce a particular score. This could be achieved by presenting for each score class a number of cases to illustrate, first, the possible diversity of cases within the same score class, and, secondly, to compare cases of different score classes to see whether and how the statistical difference between these classes is reflected in individual cases.

(b) to pay attention to the emergence of typical patterns of cases and combinations of factors in order to work out a typology of cases related to the statistical score classes.

(c) to make a special study of typical cases and, in particular, of cases which do not seem to fit into their statistical score classes, i.e. of individuals who, according to their score classes, should have become failures but were, in fact, successes ("over-achievers") or vice versa ("under-achievers").[15]

VIII.7 There are other purposes for which these case histories might be used, which are, however, outside the scope of their present investigation, such

as the study of the sentencing policy of the Courts and of the working of the penal system.

REFERENCES TO SECTION "GENERAL OBSERVATIONS"

(1) Clifford R. Shaw, "The Jack Roller" (1930, University of Chicago Press); idem, "The Natural History of a Delinquent Career" (1931, University of Chicago Press); idem, "Brothers in Crime" (1938, University of Chicago Press).

(2) Robert Lindner, "Rebel without a Cause" (1944, New York, Grune and Stratton).

(3) Frederic Wertham, "Dark Legend. A Study in Murder" (1947, London, Victor Gollancz Ltd.).

(4) Sir Leo Page, "The Young Lag" (1950, London, Faber and Faber).

(5) Gordon W. Allport, "The Use of Personal Documents in Psychological Science" (1942, Social Science Research Council, New York, Bulletin 49).

(6) William Healy, "The Individual Delinquent" (1915, Boston, Little, Brown).
    William Healy and Augusta F. Bronner, "Delinquents and Criminals" (1926, New York, Macmillan); idem, "New Light on Delinquency and its Treatment" (1936, New Haven, Yale University Press.)

(7) Cyril Burt, "The Young Delinquent" (1st edn. 1925, 4th edn. 1944, London University Press).

(8) Maud A. Merrill, "Problems of Child Delinquency" (1947, New York, Houghton Mifflin Company).

(9) Edwin Powers and Helen Witmer, "An Experiment in the Prevention of Delinquency". The Cambridge-Somerville Youth Study (1951, New York, Columbia University Press). On it see above Chapter I.

(10) Erwin Frey, "Der Frühkriminelle Rückfallsverbrecher" (1951, Basel, Verlag für Recht und Gesellschaft). See above Chapter I, para 11.

(11) Sheldon and Eleanor Glueck, "500 Criminal Careers", p. 52.

(12) Idem, "One Thousand Juvenile Delinquents", p. 181.

(12a) Idem, "Later Criminal Careers", pp. 145 and 196.

(13) Idem, "Criminal Careers in Retrospect", pp. 145 and 196.

(14) Idem, "500 Delinquent Women, pp. 28, 63, 145 and 185.

(15) See, e.g., Hilde T. Himmelweit and Arthur Summerfield, "British Journal of Sociology" (December 1951), p. 540.

SOME CASE HISTORIES

VIII.5 In the present study we have not yet been able to do full justice to each of the various objectives outlined above. We selected a random sample of every fifteenth of the 720 files originally used for the statistical investigation, altogether 48 cases, of which 46 were actually used. Thirty of these cases were found to belong to the following statistical categories (see above Chapter VI, Table 81):

Class A (likelihood of failure 1 in 8): 8 cases.

$$\begin{array}{llll} \text{,, } & B \text{ (,, } & \text{,, } & 1 \text{ in 8): } 7 \text{ ,,} \\ \text{,, } & X \text{ (,, } & \text{,, } & 1 \text{ in 2): } 16 \text{ ,,} \\ \text{,, } & C \text{ (,, } & \text{,, } & 2 \text{ in 3): } 3 \text{ ,,} \\ \text{,, } & D \text{ (,, } & \text{,, } & 7 \text{ in 8): } 1 \text{ case.} \end{array}$$

The remaining 16 cases were part of those 235 which, on account of the inadequate information available on prediction factors, could not be used for the statistical analysis.

VIII.6 Considering these 30 cases, we find

3 cases in Class A   3 were successes and 0 failures.

$$\begin{array}{llllll} 7 & \text{,, ,, } & B & 4 & \text{,, ,, } & 3 \text{ ,,} \\ 16 & \text{,, ,, } & X & 8 & \text{,, ,, } & 8 \text{ ,,} \\ 3 & \text{,, ,, } & C & 1 & \text{,, ,, } & 2 \text{ ,,} \\ 1 \text{ case} & \text{,, ,, } & D & 0 & \text{,, ,, } & 1 \text{ ,,} \end{array}$$

As our Classes A and B were given a favourable and our Classes C and D an unfavourable prognosis, whereas no definite prognosis could be made for Class X, it appears that 30 cases out of the 14 for which a prognosis could be made have been

correctly predicted in the statistical part of our investigation. We shall now give the particulars of 18 of these cases, i.e. of the 14 cases in Classes A, B, C and D, and of 2 cases each of Class X and of those not used for the statistical study. These last-mentioned 4 cases were selected in alphabetical order. It will be of special interest to study the 4 cases in which the statistical prediction was "wrong", i.e. the 3 failures in Class B and the one successful case in Class C. In the extreme instances A and D no case has been wrongly predicted.*

VIII.10 We shall also give the statistical score for each case, bearing in mind that our statistical score classes are as follows (above Chapter VI, paras. 36–40 and Table 51):

    Class A : 0 – 9·9
          B : 10 – 14·9
          X : 15 – 23·9
          C : 24 – 39·9
          D : 40 and over.

CLASS A (3 CASES)

VIII.11 *Case No.* 1. *Born:* March 1926.

Conviction: 10.46. Pavilion breaking and larceny (2 cases) 3 years' Borstal Detention.

Physique and appearance. In both features and stature, he bears a remarkable resemblance to an American film star who generally plays the rôle of a slick, tough gangster capable of breaking down police and female resistance with equal ease. He is 5 ft. 3¾ ins. in height and weighs 150 lbs.

Health. He fractured his left arm when a child. He suffered from meningitis at the age of 3 years and was concussed at 7 years. In his 10th year he fell from a bridge and fractured his skull and was said to be unconscious for 5 days. In spite of this history, the Borstal medical report states that in general he appears to be fairly stable. He suffers from chronic psoriasis.

I.Q. Coll. 84%.

Borstal History: Allocated to an "open" Borstal Institution for mature lads. Borstal Reception Report: Of friendly and cheerful disposition. He might well have been given a chance on probation. *History:* Co-operative and amenable to training. Absconded once. A lazy, self-willed little fellow. Could do well if he made the effort. Seems to be pulling himself together. A good chap and a willing and useful worker. Keen to please. No guile in him. Maintaining high standards all round. Seems very genuine. Does not appear to be a bad lot. Should be made to feel he "counts". He is good-hearted but not very intelligent. "I know where I belong and there I mean to stay." Easily led—never thinks things out for himself. Full of excesses. Showing great improvement. A bundle of energy.

Home conditions. The eighth of 9 children. Lives at home with his mother. Seems to have no home life. Apart from self and young brother, the rest of the family are married and living away from home. The home is not very clean or tidy. *School report:* Home influence was poor and not conducive to the lad's welfare.

Family relationships. The father died when the boy was 3 years old. He is on good terms at home. He seems to have had no home life and very little parental control. He was very attached to his younger brother, who is now in the R.A.F., and they were thought by many to be twins. He gets on well with his mother. A reserved boy who appears to be detached from his home. He has not written to his mother to tell her his address—says he cannot spell. He says he had been sleeping out. Following his discharge, in January 1948, he complained about the lack of

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* Mr. G. W. Lynch, M.Sc. (Econ.) has been responsible for extracting the material from these 46 files. He has also assisted in the typological work, and we are much indebted to him for his help. Certain data, such as day of birth, days of previous convictions, place names, and similar ones, have had to be omitted to prevent identification. Contradictory statements found in the records have been allowed to stand.

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accommodation at home and pointed out it would be worsened by the return of this brother from the Forces complete with a wife. In September 1949 there was some trouble at home. In March 1949 he had to be dissuaded from leaving home and now he is again talking of going elsewhere. June 1950: Is getting on very well, has a decent little girl friend (according to the lad) and they intend to get married in March 1951. If they cannot get accommodation elsewhere they will live with his mother. October 1950: His brother and sister-in-law have now moved elsewhere.

Religion. Church of England. Attended Sunday School as a child but has not kept up any connection with the Church.

Education. Attended three elementary schools until he was 15. He did not seem to make much headway. A very poor scholar in general but excelled in drawing and sketching. A good lad whilst he was in school. He was well behaved and amenable to discipline. His headmaster said he was intelligent.

Social activities. He is interested in constructional drawing and sketches a lot. He reads all kinds of fiction. He visits the cinema and likes to watch boxing matches, He does not partake of outdoor sport but does a lot of boxing at home. On discharge he means to attend evening school to study drawing and draughtsmanship.

Type of work. A newspaper boy for 6 weeks. Left on his own accord. A labourer for 2 months. Dismissed. Collier's assistant—up to time of arrest. (£2. 18. 6. per week.)

Work habits. He did not like colliery work. He said he carried out the offence to get money so that he could get away from the pits and go to sea. *Borstal report:* A good hard worker and reliable. A not very tidy individual but he improved. On discharge from Borstal he immediately went on U.A.B. assistance, for about a week. He settled to work in the pits once more and at the end of his first year on licence he appeared to be very interested in mining and was studying the subject in his spare time. A few months later he was injured on an underground shift and there was some trouble about compensation. He was idle for 3 weeks but behaved very well.

Lad comes from a Welsh mining area not classified as highly industrialised.

Discharged October 1947. Licence satisfactorily completed.

The failure score of this lad is 7-8 (longest period in any one job: 2 months).

Comment: Although home conditions were not too good, this seems to be a case where, as indicated in the Borstal Reception Report, a Borstal sentence might not have been needed. Among his assets are constructive leisure activities.

VIII.12 *Case No. 2. Born:* December 1929.

Convictions: A conviction about which no details can be traced except that he was placed on probation.

6.47. Workshopbreaking and Larceny. 3 years' Borstal Detention.
(Recalled off licence September 1949—failure to report.)

Physique and appearance. Dull, lethargic appearance. Hard features. 5 ft. 4 ins. in height. Weight 126 lbs. Deformity of left hand and dislocation of right elbow.

Health. Condition—fair. Physically weak.

I.Q. Col. 21%. Discharged from Army—poor educational attainments. Mentally weak.

Personality. Elementary School report: An unreliable and untrustworthy boy who needed constant supervision when in school. Probation Report: A very unstable boy. Has a poor sense of moral values.

Borstal History: Allocated to a "closed" Borstal Institution which at that time received mature and immature lads. On reception—he seems a poor type, no guts or go. Stupid and childish. He likes his own way. In trouble for "making a key". He was on the discharge list at the time and was therefore put back. Often in trouble for being idle and a persistent talker. A poor unambitious youth. Little interest in work. Was hardly noticed in the institution. *Housemaster's opinion*

re discharge: A shy immature youth, ill equipped for life outside. Weak and rather childish. *Governor's report re discharge:* A poor type of lad. Has done his best but is weak. May easily be in trouble again.

He was discharged in February 1949, went into Army and was discharged in less than a month because of poor educational standards. After great difficulty he was finally placed with his old firm as a labourer.

Associate reports: April 1949, inclined to be lazy, needs watching. June 1949, O.K. at work, lax in reporting. August 1949, cannot get him to report, refuses to obey instructions, never at home when visited. September 1949, got his house-master to write to him about reporting. His mother says he hides himself in the coal-house when Associate calls. Suggest recall. Is now a marked improvement since the visit to his home. Promises to report regularly. Two weeks later—has failed to report. A request for his recall made. Revoked licence—late September. October 1949, lad wrote to Borstal Associate asking for clothes on discharge. Discharged January 1950. The Associate asked that his colleague took over lad because he could not get anywhere with him. Agreed. February 1950, not satisfactory, did not sign on at Labour Exchange until early February and he, therefore, got no money. Warned about another recall. March 1950, called at office to collect some overalls. May 1950 in spite of leaving many cards and making numerous requests to members of the family, he has not come near the office. July 1950, has been unemployed as long as 3 weeks but has not been near Labour Exchange. September 1950, still refuses to keep in touch. Has done practically no work since last report and has not been in touch with Labour Exchange. Report of case to the Prison Commission. End of September, the lad was at home when the Associate called. He was taken to the Labour Exchange and a job was fixed up. November 1950, out of work again (see "work habits"), taken to the Labour Exchange once more. December 1950, visited 3.45 p.m., in bed. Out of work. "Signing on" May 1951. Out of work has got a job to go to. Apart from all this he does seem to keep out of more serious trouble.

Home conditions. Poor home conditions.

Family relationships. The father died when the lad was 15. There are 8 other children in the family whose ages range from 19 to 40 years. One son is crippled, one sister is an inmate of H—— Colony, one daughter lives in lodgings and some of the children are married. Since his father died the lad has been allowed to come and go as he pleased. He is the youngest in the family. He takes advantage of his mother's generosity and she is not very good at controlling the lad. *Housemaster's report:* He is the youngest of a large family and thoroughly spoiled at home. *Associate:* July 1950, his mother does not seem to mind his irresponsibility. September 1950, an urgent message from his home to say he had left and could not be traced.

Religion. Church of England.

Education. Elementary School report: At school until 14 years. In low backward-class. An unreliable and untrustworthy boy who needed constant supervision when in school. He was amenable to discipline.

Social activities. He chooses the company of boys much younger than himself and is content to play in the streets. In the exploit for which he was subsequently sent to Borstal, his confederate was a boy 10 years old. He was a member of a Youth Club but was not very enthusiastic. He has no particular interests. *Associate:* September 1949, his mother says he is associating with undesirables. *Associate:* May 1951, he has attached himself to a Youth Club.

Type of work:

1. Labourer—6 months—dismissed.
2. ,,   6 ,,   ,,
3. ,,   4 ,,   work too dirty.
4. ,,   3 ,,   dismissed.
5. ,,   up to time of arrest.

He failed to obtain a trade certificate in Borstal. *Associate:* March 1949, Labourer with former firm. August 1949, back with old employer (had been "stood off" because of shortage of materials). September 1949, sacked. Two days later—resumed work. Two weeks later—has given up work. On release from recall, did not sign on at Labour Exchange for over 2 weeks. March 1950 found himself a job as a labourer—£5. 5. 0. per week. May 1950, now working for British Railways as an engine cleaner. July 1950, has changed his job three times since last date. September 1950, has done practically no work since last date. Has not bothered to get in touch with Labour Exchange. November 1950, has been out of work again. Taken to the Labour Exchange for the second time in a month. December 1950, in hed in afternoon. Out of work but signing on. February 1951, working for Corporation as a labourer for last 5 weeks. May 1951, out of work but got a job to go to.

Work habits. Dismissed from various jobs as unsatisfactory—mostly lazy, on another occasion for being continually absent, and yet again for being lazy, dirty and incompetent. *Associate:* April 1949, he is lazy and needs watching. September 1949, sacked for being lazy; (later in month) has again given up his job. February 1950, made an effort over the week-end to get a job. July 1950, has changed his job three times in 2 months. September 1950, done practically no work since July. November 1950, sacked for bad timekeeping and attendance. December 1950, out of work, in bed, but signing on.

Lad comes from a large city not classified as highly industrialised. His failure score is slightly over 9 (probation 4, longest period in any one job: 6 months=5·2).
Comment. A good example of a lad who seems to be a failure in every respect except that he has not been re-convicted. Probably too lazy and passive to offend again. An illustration of the fact that our definition of "success" means nothing more than absence of re-convictions.

VIII.13 *Case 3. Born:* June 1930.

Convictions:

7.46.	Attempted officebreaking. Probation 2 years.
	Possessing housebreaking implements
	Shopbreaking and larceny.
	Pavilion breaking and larceny.
12.46.	Officebreaking and larceny. Probation 3 years.
	Pavilion breaking and larceny.
3.47.	Assault with intent to obstruct. 3 years' Borstal Detention.
	Being armed.

Physique and appearance. Aggressive expression due largely to a protruding bottom lip. Poor physique. Height 5 ft. 7¾ ins. Weight 136 lbs.
Health. Fell off his bike when 10 years old and damaged his head (his father made this statement but there is no reference to it elsewhere).
I.Q. Of fair intelligence. Third from top class at school when 14. Average intelligence (school report).
Borstal history: Allocated to an "open" Borstal Institution for immature lads. Housemaster: He arrived weak, timid, self-pitying. He lived in his own world—surrounded by anxieties; the best of other lads. Thoughtful, conscientious and kind. Is dreamy and forgetful. As he progressed in his painting work he got more confident about himself and more respect from others. He was a member of a gang, the leaders of whom thoroughly intimidated him. At first in the Borstal Institution he was frightened and aimless. But too worried about himself. Found it difficult to resist the suggestions of others. Reliable and trustworthy. A slow but thorough and enthusiastic worker. Has found that he gains respect by making his own decisions. He kept himself to himself—kept away from the other lads for fear of being led astray. He regarded them as potential enemies. Is always polite, clean,

tidy and cheerful. He trusts only the members of the staff. Needs more energy and drive. His attitude to probation was not satisfactory. A weak type of lad who will be amenable to discipline. His intentions towards his family are good (concerning the wrongs he has done).

Discharged April 1948: Worked very well and saved quite a bit of money.

Home conditions. He is a late-layer in very poor health. A good type man. Has one brother aged 20. Home control not very effective. A good type of artisan home. School officer: The boy's home conditions are very good indeed. On licence: Married and lived in parents' home.

Family relationships. Probation Officer: His parents took his probation very seriously and were always co-operative. When in Borstal he kept up a good correspondence with his parents. Governor: His is fond of his parents and means to do his best to help them. On licence: Married—wife a nice sensible girl, a good influence.

Religion. Church of England.

Education. Left elementary school at 14. Record quite good. School report: Weak character. Easily led. Not a likeable lad. School conduct satisfactory.

Social activities. He was in with a gang, the leaders of which had so intimidated a him that he was scared to return to his own district. About the offence—he had as a friend (adult) were armed with a ·45 Colt and the friend struck someone on the head with the intention to rob. The lad was merely the look-out. Police: He associates with convicted thieves and other persons of ill-repute. Father: Said lad spent his time at the pictures and in cafes. He would do painting and repair work for his mother at home. His leisure time is quite unorganised. He has little interest in games. (Two of his associates were Canadian soldiers who were committed to prison. Girl friend: She was expecting a baby and they married in November 1946.)

Type of work:

1. Office boy for 6 months.
2. Office boy 4 months.
3. Apprenticed engineer.
4. Shop assistant for 2 months.
5. Shop assistant for 8 months.
6. Signal boy on railway for 6 months.
7. Shop assistant for 1 month.
8. Painter for 1 week.
9. Painter's improver 3 months.

On licence: Plumber's improver 15 months.   Tennis court surfacer 16 months.

Then worked for an optical engineer.

Work habits:

Job 1.	Left because he did not like working with girls.
,, 2.	Left own accord.
,, 3.	Dismissed: Misconduct and bad timekeeping.
,, 4.	Left own accord.
,, 5.	Left to join Southern Railway.
,, 6.	Discharged because of his first offence.
,, 7.	Left own accord.
,, 8.	Dismissed—unsatisfactory.
,, 9.	Left because of last offence.

Borstal work report: Very handy. Rather slow but not lazy. Is careful to the point of fiddiness. Very good on theory (painting work). Should rise above the level of the ordinary tradesman. Is a keen and patient modeller in wood and plastics.

Discharged on licence from Borstal April 1948 and immediately got a job as a

plumber's improver which he kept until 1949 (July) when he changed to better himself. In November 1950 he changed once more for a still better job.

Comment: The typical success story of a lad from a good home, lacking discipline and led astray by more determined associates. His Borstal training and his marriage enable him to settle down.

CLASS B (7 CASES)

VIII.14   *Case No. 4.   Born:* July 1927.

Previous convictions:

8.41.	Stealing.		Probation 2 years. Costs 25/-.
5.42.			Fined £3. Costs 6/8.
1.45.	Office and shopbreaking and larceny.		Probation 2 years.
8.45.	Wilful damage (2 cases).		Fined £2. and 2/2 costs.
4.46.	Taking and driving away.		9 months' imprisonment.
4.47.	Larceny.		3 years' Borstal Detention.

Subsequent convictions:

12.49.	Drink.		Fined 10/-.
2.50.	Common assault.		Fined 10/-.

Physique and appearance. Blue eyes and fair wavy hair. A heavy lower face and relatively narrow head. Expressionless and dull. He has a considerable number of tattoo marks on fingers, hands and arms and also appearing on his neck above his collar. Height 5 ft. 7 ins. Weight 123 lbs.

Health. No evidence of bad health until his period of licence when, in December 1951, he had been ill and his doctor said he was to change from merchant seamanship to a shore job. In July 1951 he was in hospital following an accident whilst doing farm work and which resulted in the amputation of his leg.

I.Q. Coll. 45%. Mentally defective. Discharged from Army in 1945 after only 37 days of service including 14 days' leave and 4 days absent without leave. *Discharge Report:* Failure to reach the required standards in the various selection tests set a recruit on joining the service.

Personality. Probation Report: Weak and easily led. Unresponsive. Wormwood Scrubs, May 1947: Wilful damage to a pair of boots, 5 days No. 2 diet, 2 days no association, 10 days no privileges. Allocated to a "closed" Borstal Institution for mature lads. March 1948: *Borstal history:* Improper conduct (having led another lad in bed with him at 10.20 p.m.), 14 days No. 2 diet. Reduced grade to probation for 3 months. June 1948: Absconding for one night. 9 days C.C. 9 days No. 1 diet. 21 days No. 2 diet. Reduced grade to probation. *History:* Wormwood Scrubs: A queer fish—unreliable and untruthful. Has made up his mind to work and keep out of trouble. Is gradually becoming less indefinite. A very quiet type. "Gutless." Goes with the tide. Very little change—keeps very much to himself. *Governor's discharge opinion:* A rather solitary lad. *Housemaster's discharge opinion:* A peculiar, silent youth. Has only gradually asserted himself. *Discharged* Mar. '49.

On licence: March 1949, not co-operating. Warning letter sent. April 1949, letter sent to him warning him about his associations. December 1949, a big improvement in him. He reports regularly when asked. February 1950, charged with assault. Warned about his behaviour.

Home conditions. The home is in a working-class district. Fairly clean and comfortable but poor. He was evacuated from school in 1940 but he returned after

a months because he could not settle down. In June 1950 he was married and lived with
his wife in two rooms in his mother-in-law's house.

Family relationships. His father is a machine-hand. He has a stepmother, two
brothers, two sisters, one stepbrother and five stepsisters. Four stepsisters have
been convicted of larceny. One stepbrother and one brother have been convicted
of larceny. There has been only one offence in each case and the last of these
offences was in 1941. The police know nothing of detriment about the step-
mother. *Probation report.* His parents are of good character. They spend their
time at home and are temperate. Their home is clean and well cared for. Both
parents are kindly disposed towards him and the family altogether appears to be a
happy one. The parents are a bit too easy-going. He is the eighth child of a family
originally comprising 11. There was considerable correspondence between the
lad and members of his family whilst he was in Borstal. His father says: "He
is a very good boy and all right when on his own." The mother says: "He has
always been a very good and willing lad." He married in June 1950. From then
until the end of his period of licence the Associate reported that his married life
seemed very satisfactory and that he took his family responsibilities very seriously.

Religion. Church of England.

Education. He attended an elementary school and was evacuated in 1940. In
October of that year he started work (when he was 13 years old). The standard he
reached in his school is not known. His conduct was believed to be satisfactory.

Social activities. Probation report 1947: When younger he was in the Boys'
Brigade. He has not been in touch with any youth organisation since leaving
school. His associates have been fishing lads. For some months he has been
keeping company with a local girl who is rather unstable. His spare time is spent in
dance halls and cinemas, etc. His father said the boy spent most of his spare time
at home but made occasional visits to club or cinema. His mother said he spent his
spare time at the pictures or at home. His father said the lad would go to sea and
earn good money and when he came home at the end of a spell at sea he would meet
his pals and treat them to a few drinks and then the trouble would start.

Within 2 weeks of being discharged on licence he could not accept a starting date
of a job because he was expecting a girl friend in the A.T.S. to come home on leave
and they were intending to become engaged. He also immediately returned to
keeping bad company. In August 1949 he was said to be courting a girl and so
keeping away from bad company. In December 1949 he was fined for being drunk.
In May 1950 the Associate learned that his girl friend was expecting a baby.

Type of work:

1940.	Lather boy.	12/6 per week. 3 months.	Not known why he left.
1941.	Paper roundsman.	7/6 per week. 8 months.	Left on own accord.
1941.	Box maker.	14/- per week. 2 years.	Dismissed for irregular time-keeping.
1943.	Cinema doorman.	£1. 10. 0. per week. 2 months.	Dismissed—lazy.
1943.	Deckhand.	£4. 0. 0. per week. 4 months.	Left own accord.
1944.	Cinema doorman.	£3. 5. 0. 3 months.	Lazy and unpunctual.
1944.	Errand boy.	£1. 10. 0. Left to go on fishboats.
1944.	Deckhand.	£4. 0. 0. plus bonus. 6 months.	Left—poisoned hand.

Many fishboat jobs followed.

Enlisted August 1945. Discharged September 1945.

Then on boats again until April 1946 when sent to prison.

October 1946. Work in a canning factory. Left after 1 week, because his
stepmother was discharged.

Then a labourer on the railway for 2 months. Left to return to ships. Deck-
hand until he was sent to Borstal.

On licence: from 10.3.49.   April 1949, signed on a trawler.

August, signing on at Labour Exchange. Late August, worked as a labourer for
1 day. October, working in a lightship.

February 1950, left lightship.   March, still out of work.

April 1950, back on trawlers (in Scottish waters).   July 1950, working as a boiler scaler back in Lowestoft.   December 1950, back on the fishboats.   December 1950, has left the sea (doctor's orders) and has a job on a farm (milking cows and looking after horses, etc.)   March, been out of work and in the meantime has returned to the fishboats.   July, returned to farm work and met with accident.

Work habits.   Lazy.   Irregular in job (other than sea jobs, where he appeared to give satisfaction).   Borstal work record: Gave satisfaction.   A quiet plodder, Could be trusted.   Did not have to be told everything.

After discharge on licence: July 1949, employers very satisfied with him.   August, "blacklisted" by boat owners because he did not return to the ship after a week's holiday.   He said it was not his fault he missed a train connection.   He liked working in a lightship because he preferred the solitude.

Lad comes from a fishing town.   Failure score: 18 (probation 4, fined 9).

Comment: In spite of two subsequent fines, he counts as a success.   Received his Borstal sentence after serving 9 months in prison.   On the debit side are low intelligence and bad conduct in Borstal.   Several "steps" with criminal histories, but home and family relations otherwise good.   This, together with a happy marriage, may explain the absence of serious trouble after discharge.

VIII.15 *Case No. 5.*   *Born:* October 1924.

Previous Convictions:

    1.46.   Larceny.   Bound over in sum of £5.
    10.46.   ,,   (9 cases)   3 years' Borstal Detention.
    (2 of these cases amounted to over £600.)

Physique and appearance.   A rather unfortunate appearance.   He has a long thin head and deep recessive eyes out of focus.   He wears spectacles towards the end of a long nose and he has slightly protruding irregular teeth and hammer toes.   Height 5 ft. 7 ins.   Weight 130 lbs.

Health.   An epileptic.   He fell and injured the front of his head when he was about 12 years old.   He was unconscious for a few hours and fits commenced the next day.   He had five or six a day for the next two years or so.   Poor health interfered with many of his jobs and severely limited his choice.

Personality.   (His first crime could never have been discovered if he had not confessed.) Instability due to epilepsy.   School report—seemed to like the limelight and to eat a dash.   A spoilt child.   *Local prison:* rather erratic mainly because of his history of epilepsy.   Stole over £600 from his mother to impress a girl with whom he had been corresponding—he had never seen her.   (With the money he stayed in a hotel.) A case where strong discipline is needed.   He throws the towel in easily.   Has been coddled by his mother.   *Borstal history :* Allocated to a "closed" Borstal Institution for immature, backward lads.   Untrustworthy—goes out of way to give false impressions.   Two-faced.   Absconded—recaptured same day.   Absconded again.   Refused labour.   A poor actor—spineless and weak.   Unable to stick a job for very long.   Does not consider the consequences of his actions.   Housemaster, although a doubtful quantity, he has earned an exceptionally good report from his party officer.   Towards the end he was unusually well behaved.   He was discharged in October 1948 on licence and was kept hanging about for 4 months whilst waiting to be accepted into a Rehabilitation Centre.   First he wanted to be a clerk and was rejected, and his second choice was market gardening.   He became very fed up and miserable.   In April 1949 the impression was received by the Associate that something was wrong at the Rehabilitation Centre.   Apparently there was some concern because of his plausibility and lack of effort.   Nothing was said about his fits but hysteria was mentioned.   In July he told the Associate he hoped to marry a girl in

September (he had already bought her an engagement ring) but he also said his mother did not know anything about his ideas in this direction.

Home conditions. His father—a cafe proprietor—died in 1941 from heart trouble. His mother has two cafes and his sister looks after one. Enough money is earned in the summer to live through the winter. He was born in C—— and lived there until he was 11 years old. In the summer he lived in lodgings in S——, where his father had a cafe. He married in October 1949 and lived with his wife in his mother's house. In July 1950 he bought a house in L—— through a building society.

Family relationships. He has one older sister who is married and living apart from her husband. He is on very good terms with his mother, who bears him no ill feelings for taking over £600 from her. The lad's health has always called for extra care and his mother has always helped him. His sister took him to school until he was 12 years old. In the opinion of the Probation Officer, the mother is apt to spoil him. He corresponded well with many of his relations, including an aunt and grand-mother, etc., and one or two young ladies. In May 1949 he called on the Associate when on his way down to London to visit some friends. He was looking very smart and was able to make this sort of trip on the strength of money his mother gave him.

Religion. Church of England. He attended Sunday school and church in his schooldays but it was sufficiently compulsory to make him dislike it and prevent him going since.

Education. Moving to S—— each summer made his schooling erratic. His last school report described him as being 2 years retarded and rather a baby for his age. He was described as honest, truthful and amenable to discipline in his schooldays. It was further pointed out that he did not receive proper schooling because of his fits.

Social activities. He was fond of dancing and attended the cinema regularly. He had no particular associates and was frequently seen out alone. In May 1949 he appeared to have a regular girl friend in S——. He married in October 1949 and in January 1950 he seemed settled. In July 1950 he was living in his own house and his wife was expecting a baby in December.

Type of work. Had about 11 jobs since leaving school. Worked as a labourer, page-boy, and later in a N.A.A.F.I. canteen for 6 months. For the next 2 years he travelled the country with his mother as her assistant (she was working as a canteen manageress). In 1945 he worked as a labourer in London on the bomb sites. This job lasted 10 months and he received a wage of £5. 18. 0. per week. He liked London very much and he stayed and got a job in a toy factory. Later, his mother used her influence and he got a job as a bathroom cleaner and earned £5. 15. 0. per week and all found. He left this job suddenly because it was then when he took his mother's money and went to H——. In June 1949 he was working as a lathe-hand in L—— for £4. 0. 0. per week.

Work habits. He has left many jobs suddenly and without reason, but there is no doubt his health complicates the issue. He was dismissed from the toy factory because he was near machinery and might have been injured if a seizure occurred in the course of a fit. Before he obtained work as a lathe-hand in L——, his mother refused to let him sign off the Labour Exchange. He had been out of work some time and further refused to help her. At that time she said she was finished with him because of his attitude. During the last year of his licence, he was in regular work as a lorry driver's mate and seemed settled satisfactorily.

Failure score 10·1 (not living with parent(s) 7·5, longest period in any one job 2·6).

Comment: His main handicaps are epilepsy and low intelligence, but he is greatly helped by a fairly well-to-do mother and a happy marriage.

VIII.16.   *Case No. 6.   Born :* February 1927.

Previous convictions :

| 11.40. Stealing. | Bound over on Probation, 1 year. 5/- costs. |

8.41.	Breach of Recognisance.	Sent to Special School (c/o Local Authority.
2.41.	Possessing ammunition.	Charge withdrawn on being handed over to Local Authority).
1.44.	Breaking and entering an office.	Probation Order, 2 years.
2.47.	Larceny (13 other cases taken into consideration).	3 years' Borstal Detention.

Subsequent convictions:

4.50.	Housebreaking.	Recall.
7.50.	Housebreaking (2 cases).	2 years' imprisonment.

Physique and appearance. Right leg artificial. Height 5 ft. 9 ins. Weight 156 lbs. A rather flabby appearance. Bad scars on forehead and left cheek and right hand. His right leg was amputated when he was 11 years old—was said to be due to receiving a kick whilst playing games. (School says he was injured climbing in a building partly demolished.)

Health. O.K.

I.Q. Col. 85%.

Personality. Elementary School report: Dishonest from the age of 7 years. Untruthful and a very bad influence in the neighbourhood. Truanted a lot at school. Was a persistent juvenile delinquent. Was treated by the school psychologist, who got nowhere. Probation report: Was a member of a gang when doing these acts. A very deep lad. Father: The boy has been weak-willed ever since his amputation. Allocation Survey: The lad has ability. He knows he has been a bit of a cad and is ashamed about it. Has used his artificial leg to get sympathy. Says he can play football: needs no sympathy. *Borstal History:* Allocated to a "closed" Borstal Institution for immature lads. Considering his bad record he has done well. He makes light of his disability—is active and has plenty of energy. Is keen and co-operative. Is heading for trouble. He is antagonistic unless he thinks he has one's sympathy. Housemaster's discharge opinion: A cheerful type. Wins one's admiration by making light of his disability—but he has a poor record.

Discharged October 1948.

Home conditions. Working-class parents (father and stepmother). Father a holier man. (In Army at time of investigations.) The father remarried in 1940. Home conditions are good. The street and house can be described as reasonably good. Elementary School report: The mother died when the children (two boys and one girl) were very young. The stepmother is very respectable and has three children of her own—never in trouble.

Family relationships. A young brother was in an approved school. When his father remarried in 1940, he lived with his stepmother and then with his aunt and later with friends. He returned to live with his parents in 1946. He does not get on with his stepmother. Is on good terms with his father. The father says his son has been out of his control from 1939 to 1947 (father spent most of this time in the Army). Probation report: Relationships with parents rather strained at present. From 1940 he was troublesome—stealing, etc., and out of control. Elementary School report: The stepmother was never quite able to handle the stepchildren. In April 1950 he was living in lodgings in S—— because his parents had asked him to leave the house (he would not work). In May 1950 (when on bail) he was living with his aunt and uncle in S——.

Religion. Church of England.

Education. Elementary School report: He went to a special school (as a cripple) and learned shoemaking. His attendance at the Elementary School was very unsatisfactory (much truanting). (On release from Borstal he went on a Ministry of Labour course in boot-repairing.)

Social activities. He was a member of a gang. His associates were committed for trial with him. He was a bad influence in the neighbourhood. His father said the lad spent his time at the cinema, football matches, and in billiards halls (his father called them "the usual entertainments").

Type of work. On leaving school—2 months in Corporation Salvage Dept. Then 4 months—tyre makers. Then a shoemaker for a short period. A machinist for bag makers for about a year. With builders for 1 year. Then back with bag makers up to time of offence for which he was sent to Borstal. On release from Borstal (October 1948) went on food-repairing course. (This did not seem to materialise—or was a very short course—because at the end of October he was working as a jigger in a pottery works.)

Work habits. Left bag makers on first occasion because of staff reductions. Was dismissed from builders because of dishonesty. Following his release from recall (April 1950 recall, released November 1950), he was dismissed from two jobs for insubordination. A third job he left after a few days because of a disagreement with his employer. In April 1960 he had been turned out of his parents' house because he would not work (and apparently would not sign on at the Labour Exchange). Borstal: A good worker—plenty of energy.

Lad comes from a highly industrial area in the Midlands. Failure score: 13·8 (probation 4, highly industrial area 8, longest period in any one job one year, i.e. 1·8).

Comment. Judging from his statistical classification he is an "under-achiever". In the light of his record, however, failure was not unlikely. His only advantages are a high Columbian test score and a good work record in Borstal. Otherwise, practically everything seems to have been against him: a serious physical handicap, a history of early delinquency, truancy, gang membership, difficulties with stepmother.

VIII.17. *Case No. 7.* *Born*: February 1928.

Previous convictions:

4.45.	Larceny.	Probation of Offenders Act. 20/- costs.
4.46.	Unlawful possession. Wilful damage.	Bound over own recognisances £5. 2 years and pay costs. P.O.A. with residential conditions.
3.47.	Taking motor-car without owner's consent and possession of housebreaking implements by night.	3 years' Borstal Detention.

Subsequent convictions:

2.50.	Attempted shopbreaking.	Recall Borstal training.
6.49.	(Larceny—not guilty.)	
9.49.	(Charged with stealing and breaking open a gas meter—not guilty.)	
8.52.	Larceny of motor-car.	Result unknown from Borstal Association records but a note in September 1952 states "will apply for recall".

Physique and appearance. A rather handsome-looking lad with a defiant expression. Height 5 ft. 5½ ins. Weight 150 lbs.

Health. Normal but he shows some anxiety about his state of health. (Army category—Grade III.)

I.Q. Col. 49%. (Volunteered to join Army but failed in education test.)

Personality. Allocation Survey: He is a restless individual. Has a habit of quarrelling with those over him. An irresponsible lad with a light-hearted attitude to life. His attitude to probation was indifferent. Of himself, he said in 10 years' time he would like to have a wife and a house of which he could be proud. He is very careful about his appearance. *Borstal History:* Allocated to an "open" Borstal Institution for mature lads. He absconded on four occasions. He later came to be head boy in kitchen for a short period. Received very good work reports (obtained assistant cook's certificate). Housemaster's Discharge Opinion: A pleasant lad but immature. Cheerful, willing but a rather weak character. He received consistently good work reports. At present is the head boy in the kitchen at which he is doing remarkably well. This has given him confidence and has proved very beneficial. Should do well in the Army Catering Corps as a cook. His I.Q. is slightly under average and he is a rather weak character but he is a consistent trier. Governor: He is rapidly growing up and will further mature before discharge. A thoroughly nice lad in spite of his home background. *Discharged* 16.3.48. In November the Borstal Association reported his conduct was good. From the middle of June 1949 he became increasingly difficult and tended in the main to ignore the requirements of the Borstal Association (very difficult to get him to report). In February 1950 he was continuing to ignore Borstal Association's letters. On his first appearance in February 1950 he was *recalled for further Borstal training.* On his return to Borstal he was found to have changed—he was now bitter and cynical. He later indicated that the home is the real cause of the trouble and he said he was not sure whether to return there. "He resents correction. He is well on his way to Dartmoor." Is an excellent leader. Making good towards the end of the second period. *Second discharge* 30.11.51.

Home conditions. The father is a merchant seaman and away from home for long periods. Three brothers—one ex-Borstal, another at present in prison. Five sisters, all working. One sister and one brother older and two brothers and four sisters younger. A very poor home in a very poor neighbourhood. One married sister occupies a room in the mother's home. The ex-Borstal brother keeps a stall (he was caught with the lad in a stolen car complete with housebreaking implements). A terribly overcrowded house. At one stage he had no fixed abode; he was living as a rag and bone merchant.

Family relationships. He thinks the married sister tries to be the boss in the house. It was following a quarrel with her that the "driving and taking away a motor-car and wilful damage" charges occurred. The mother is friendly but in poor health (suffers from heart attacks). The eldest brother was turned out of the house by the father. In 1947 the police said he was not on good terms with his parents. His mother said he was really an "at home" boy who had come under the bad influence of his elder brother. He has very strong feelings against his married sister, who he thinks is so bossy. He has complained everywhere about this married sister. He is on good terms with his mother. In December 1948 he phoned the Borstal Association and said he had had a "flare-up" at home and he was worried because his brother was just out of prison. January 1949, home relationships again strained. In July his mother complained that he would not work and stayed in bed until noon each day. It seemed his girl friend was keeping him in cash. The lad was sleeping rough with another lad. November 1949, Borstal Association records that the mother is very fed up with the lad but the Borstal Association thought she might alter when he started earning some money.

Religion. Church of England. Went to Sunday School regularly but has not been to church since leaving school. In Borstal he was "anti-church" and said: "It's about time someone refused to go to church."

Education. His school record was good. His attendance was very good. He was honest and truthful. His ability was normal but his educational attainment was below average.

Social activities. He belonged to the Army Cadets and was a keen drummer.

Keen on boxing. Most of his companions were the "money without work" variety. The police knew all of his known associates and had been convicted of theft.

Type of work. He was truck loading for a year, 35/- per week; builder's labourer (3 months), 40/- per week; labourer (3 months, 9 months, 3 months, 40/- per week; labourer in glass works, 8 months, 43 per week. Then many and varied jobs (he drove a horse and cart for a rag and bone dealer), none of which he kept for long. He volunteered for the Army but was rejected. He said he wanted above all to get into the Merchant Navy as a cook. Following his first discharge from Borstal, he obtained work as a labourer. In April 1949 he was working as a cook. In July 1949 he worked for a short time as a cleaner in a factory. In September 1949 he was working for a sub-contractor. In November 1949 he was supposed to have started work in a glass works. Following his second Borstal discharge he again started work as a labourer. In January 1952 he was working as a "mixer" and getting about £10 per week. In March 1952 he volunteered for the Army and signed on for 3 years.

Work habits. He received very good work reports from Borstal Institutions (obtained assistant cook's certificate). He quarrelled with most of his bosses. The police said he was discharged from most of his jobs as unsatisfactory. He was discharged from one job as being lazy and he left a couple of jobs on his own accord. Following his first discharge from Borstal, he gave up his initial labouring job after he had been involved in some domestic trouble at home. He spent considerable periods out of work and stayed in bed for most of the morning time. He was dismissed from the glass works in November 1949 because he turned up for night shift with others and they were all drunk and he manhandled the timekeeper. He otherwise had a good record at this concern. He was out of work on each occasion of his arrest. He very much liked working for the rag and bone merchant, and had a hankering for working in fairgrounds.

Last comes from a highly industrial area in London. Failure score: 13·8 (probation 4, highly industrial area 8, longest period in any one job 1 year=1·8).

Comment: He, too, is an "under-achiever", but in his case real deterioration seems to have set in after his recall.

VIII.18 *Case No. 8. Born:* July 1928.

Previous Convictions.

9.44.	Larceny.	Bound over in sum of £5. Probation 2 years, costs 7/6.
5.45.	Larceny (3 other cases taken into consideration).	Bound over in sum of £5. Probation 2 years, costs 5/-.
12.46.	Larceny.	3 years' Borstal Detention.

Physique and appearance. All of his features appear over-emphasised. He is deep-eyed, shaggy-browed, large mouth, thick lipped, etc. Height 3 ft. 6½ ins. Weight 135 lbs.

Health. Consumptive bowels. Far from robust.

I.Q. 40%.   School report: Low mentality.

Borstal history. Allocated to an "open" Borstal Institution for immature lads. Is seriously bad health responsible for his cotton? He works well and his conduct is good. A weak, feeble youth. Works steadily; untidy. Anxious about his mother. Housemaster's opinion: He is a weak, quiet lad who has worked steadily. Is untidy in appearance. Governor's report: The product of an unsatisfactory home and separated parents. School report: No energy. Gave little trouble when at school. He was quite a likeable boy. Difficult to get him to keep in touch with the Associate.

Home conditions. Borstal record: A poor home and bad background. School report: A very poor home.

Family relationships. Governor's report: His parents are alive and well. They

are living apart. His mother is 59 years old and the lad has lived with her. He has three brothers and a stepsister. One brother is in Borstal, another in a Home Office Approved School and the third is in the Army. His stepsister is married. The father is at present living in another part and the mother has very little control over the family. Borstal Association record. His return to his home is not recommended. The stepsister and brother-in-law, who live in a prefabricated house with their family of four small girls and a boy of 8 years, are prepared to have the lad live with them. This would be a satisfactory arrangement. The relationships are good. When in Borstal he appeared to be very anxious about his mother.

In April 1948 he was *discharged* on licence and went into the Pioneer Corps in the Army. On demobilisation in March 1950 he went back to his mother's home and shared one bedroom with his two brothers. When he returned home after demobilisation there were many quarrels between the brothers and the police had had to be called to quieten them. In September 1950 the Associate reported that the mother was in a very poor state of health and was very irritable and constantly complained about her sons.

Religion. Church of England.

Education. He was sent to a Special School and the report says he was placed in a class for backward children in an open-air school. His mentality was low and he had no energy. He gave very little trouble when at school. His attendance was poor and spasmodic.

Social activities. Police report: His character is not good. He associates with youths of his own age.

Type of work. August 1942–November 1942, roundsman. December 1942–March 1943, labourer. April 1943–March 1945, driver's mate, £2. 15. 0. per week (longest job 9 months). April 1945–October 1945, labourer, £5. 16. 0. per week. In Borstal he was a farm labourer and liked it. He wanted to take this up on his release. Upon his return home following demobilisation, he obtained a job in a metal casting firm. He was on night work and expected to get about £8. 0. 0. per week.

Work habits. He left his first job on his own accord. He was dismissed from the next two jobs and his fourth job came to a finish and his services were dispensed with. In Borstal he was said to work steadily. His military record referred to him as "Very good, clean, honest, reliable and hard worker."

Failure score : 6·6 (probation 4, longest job 9 months=2·6), and his classification under B seems to be a mistake.

Comment. Statistically and in fact he is a success, surprising though this is in the light of his history: poor health, low intelligence, a broken home.

VIII.19   *Case* No. 9.   *Born:* October 1929.

Previous convictions:

11.41.	Storebreaking and larceny.	Bound over on Probation 12 months.
3.43.	Stealing milk from doorstep.	Bound over on Probation 12 months.
5.47.	Shopbreaking and larceny.	3 years. Borstal Detention.

Physique and appearance. An expression of bewilderment. Height 5 ft. 8 ins. Weight 147 lbs. Little finger of left hand deformed. Slight build. Tattoo marks on both arms.

Health: Fit.

I.Q.: Crd. 68%. Average intelligence. Allocation Survey: Low intelligence.

Personality: Allocation Survey: A bright, alert, clean lad. *Borstal history:* Allocated to an "open" Borstal Institution for mature lads. A weak lad. Works well in the kitchen. Mature. A good deal of character. Very easily led. Very co-operative. Governor: He went with the other two men on the last job because

they said he was "windy." A cheerful lad who has done well. Housemaster: A pleasant cheerful youth who has never given any trouble since he arrived here. Is this a case of having got in with the wrong crowd? He is very well mannered and a good mixer.

Home conditions. Mother, father, a married brother, his wife and 3 children, a single brother and P—— live in the same house. Nine in 5 rooms. Two brothers are away from home. The home is described as poor and overcrowded. It is clean but very untidy (washed clothes hanging up in the sitting-room and strung across the hall). The Probation Officer blamed the crowded home as well as lack of parental control for the lad's trouble. No privacy in the home.

Family relationships. The father is a transport driver. He works on shifts. He is not very often at home. The mother is very incoherent and suffers from delusions. She says the neighbours "somehow know" everything she is thinking. The parents exercise very little control over the lad. He was not evacuated during the blitz. The single brother living at home (age 25 years) was recently convicted of indecent assault on young girls in cinemas. The relationships between lad and the rest of the family are said to be good. He does not get on well with his sister-in-law and the children, and so goes out most of the time. School report: The mother has no control over the boy. No interest was taken in the boy at home. He was left to his own devices. Discharged from Borstal in June 1948 and went into the Army. He was a cook very near his home and visited home very often. In June 1949 he had a regular girl friend in his home town. In August 1949 the police visited his home about certain thefts in his home town. The girl friend learned of his past record and threw him over. In November 1949 his father died and he dropped the idea of signing on in the regular Army. He was demobbed in March 1950 and returned to his home. The Associate said he had been very helpful to his mother since his father died.

Religion. Church of England.

Education. Elementary School until 14 years. Low intelligence. Concentration very poor. Needed strict supervision. Truanted on occasions.

Social activities. Cycling, camping out, fishing. Stamp collecting—about all of which he was very enthusiastic. He kept late hours. On each occasion of arrest, he was in the company of the same young man (a slightly younger youth). The police suspected him of other "Jobs". He was at no time attached to a Youth Club. After his demobilisation the Associate pointed out that he was not a member of any club and that he went to the cinema too often.

Type of work. He worked for a glazier for 3 years since he left school and had only that one job. He was receiving a wage of £3. 5. 0. per week. In Borstal he worked for the last 6 months in the kitchen. On demobilisation he returned to the glazier's employment in his home town.

Work habits. He received an excellent character from the firm of glaziers. The firm was ready to re-employ him upon his discharge from Borstal, and stated "he has proved himself a first-class hand and an industrious worker". The employer asked for him to be bound over and would be prepared to help him in that case. The lad said his boss treated him in anyone's home.

Failure score: 12 (probation 4, highly industrial area 8).

Comment: His excellent work record and good family relationship were assets which helped him to overcome the handicap of a poor and overcrowded home.

VIII.20 *Case No.* 116. *Born:* April 1929.

Previous convictions:

9.46.	In a dwelling house for unlawful purpose.	1 day's imprisonment.
10.46.	Shopbreaking and larceny.	3 years' Borstal Detention.

Information about the second offence (which had occurred before the first) was obtained during the investigation of the first charge.

Subsequent convictions:—

12.48.	Suspected person.	Discharged.
5.50.	In Army in Germany. Charged with taking a German girl into the barracks.	6 months' detention.
6.51.	Possessing lead piping unlawfully obtained.	6 weeks' imprisonment.
8.52.	Larceny in dwelling house.	Adj. unknown.

Physique and appearance. A very marked convergent squint; otherwise handsome features. Height 5 ft. 3½ ins. Weight 136 lbs.

Health. Normal. Strong and tough.

I.Q. Col. 78%.

Borstal history. Allocated to an "open" Borstal Institution for immature lads. When first in the Institution he tried to be the "fly boy ". The Borstal Associate always remarked on his smart appearance.

In September 1948 he was discharged from Borstal and went forthwith into the Army and within a month he had twice absented himself. Thereafter he quietened down for a few weeks but appeared in —— Magistrates' Court in early December, charged with being a suspected person. He was, however, discharged and within 2 weeks was on his way to Germany to continue his military service. In early July 1949 he was on leave in this country and he called upon the Associate, who was very impressed by the lad's smartness. Nothing further was heard about the boy until the middle of November 1949, when the mother wrote to say he was doing quite nicely, and that she was hoping to find an unfurnished room so that they could be together when he had completed his period of service.

In May 1950 he was charged with taking a German girl into the barracks and was sentenced to 6 months' imprisonment.

In the middle of October he again arrived in this country on leave and reported—looking as smart as ever. He complained to the Associate that his mother was ill and "up to her eyes in debt ", and that most of his savings had gone. He was very annoyed about all of this and he said he would not return home when he was demobbed. It is not possible to say what, in fact, did happen during the next few months until it was learned in June 1951 that he had appeared at W—— I—— Magistrates' Court and had received a sentence of 6 weeks' imprisonment for having unlawfully obtained a quantity of lead piping. The last to be known was in August 1953, when he was due to appear at a Magistrates' Court charged with larceny in a dwelling house.

Home conditions. Born and lived in S.W. London until 17 years (evacuated for some time to Surrey). Then at 17 years he and his mother moved to Paddington. Conflicting reports and omissions make it very difficult to trace the background of his family structure and relationships. One source states baldly that his father "is dead "; elsewhere one learns that "his mother is a waitress and will have nothing to do with the father ", in neither case is there a reference to time. It is said that he came from a good working-class home and one can only surmise that at some time during the war years associations with the father finished and the general conditions and standards deteriorated. The lad continued to stay in lodgings in Surrey after he had completed his period at school, and, further, the mother appears to have acquired the habit of living in furnished rooms.

Borstal Associate states that the mother works as a waitress and has nothing to do with the father.

November 1949. Mother said she was hoping to get an unfurnished room so that she could be with her son.

Family relationships. In Borstal he sent letters to his mother and a young lady who is said to have "stuck by him". Mother was not helpful—as far as visiting was concerned—when he was in Borstal; he had visits from his girl friend masquerading as his sister. The recording officer states "mother needs training as well as the lad".

Religion. Church of England.

Education. Elementary School.

Social activities. Not interested in games or sports. Had a girl friend before he entered Borstal. Mother said he used to belong to a Youth Club and then they moved and he went to the pictures and dance halls occasionally. Before he had a girl friend he used to accompany his mother on various aerial visits.

Police; He associated with undesirable characters. He has been sleeping in shelters and keeping very late hours. He is suspected of other shopbreaking and housebreaking in the Paddington and Harrow Road districts.

Type of work:

April 1943–March 1944. Fitter apprentice, Rolls-Royce. 10/- per week.
6 months' work for timber firm in Dorking.
1 year's work for timber firm in London.
6 months' work for timber firm in Harrow Road.
Plumber's mate for a period.

Work habits. Police could trace no particulars concerning any of the timber firms for whom he said he worked. He could not remember the name of the first plumbing concern for whom he worked. The second plumbing firm had no record of his employment. In the Army he took a specialist's course in driving.

Failure score: 10·6 (highly industrial area 8, longest job 1 year, 2·6).

Comment: An "under-achiever". Apart from his intelligence, there seem to be only bad points in his history : broken home, beyond control of his mother, bad district, bad associates and bad work record.

CLASS C (3 CASES)

VIII.21   *Case No.* 11.   *Born:* March 1929.

Previous Convictions:

5.44.	Larceny (2 cases).	Bound over on Probation.
1.48.	Larceny.	Approved School.
11.46	Absconding from Home Office	2 years' Borstal Detention.
12.46	Approved School.	

(He resorted to housebreaking and handbag snatching.)

Physique and appearance. A Jewish youth with good features and expression. Height 5 ft. 6½ ins. Weight 147 lbs. A large, well-made lad. He has an impediment in his speech which is worse when he is excited or flustered. The lad says his stammer is due to an "accident" at age of 10 years.

Health. Good. He is strong and well built with no physical defects.

I.Q. Col. 72%. Average intelligence.

Personality. Home Office Approved School report : Erratic behaviour, generally frank and truthful but unco-operative. Police report : He has a strong personality and leads others into trouble. Probation report: In general he was a difficult lad to deal with. Home Office Approved School report: Not a good mixer. " . . . he developed a grudge against the Borstal system and the Staff could not gain his co-operation". He had good periods of progress for 3 months at a time and then he would abscond. Had an unsettling influence on other boys and would lead them away.

Borstal History. Allocated to an "open" Borstal Institution for mature lads which is used especially for absconders. Borstal medical report: Not a good mixer. Has a strong personality. Governor's remarks on reception : Stammers. Seems to have no aims or "guts". Slack. Solitary nature. Expected to be unreliable during early stages at Borstal.

May, 1947. Visited by brother in Navy.

June, 1947. Settling down well. Has strength of character. A good house influence. Corresponds well.

August. Seems nervous. Due to impediment in speech? Visited by uncle and friends.

Party and house reports consistently good. Is not a good leader but sound. Looks after himself but not keen or interested in other people's doings.

December, 1947. Has not slipped at all. House captain. Has won respect if not popularity of rest of lads.

Discharged 29.1.48.—to Army.

Governor's discharge report: Co-operative and pleasant. Not a good mixer. Has sense of humour. A frank lad.

Home conditions. Police report: The lad's uncle and aunt (with whom he lives) are respectable middle-class Hebrew people.

Home Office Approved School report: A good working-class home.

Family relationships: His father, mother and a sister died of tuberculosis. His mother died in 1931 when the boy was 2 years old and his father died in 1933. Following the mother's death, the father remarried and the stepmother died in 1934. He lives with his uncle and aunt, who are his guardians.

Police report: He is on fairly good terms with his guardians. He is also on good terms with his cousins.

Probation report: He was not contented with his home life. His uncle was often unable to control him and complained about the lad's conduct. On the other hand, he often complained about his treatment at home and his having to do so many household duties. Attempts were made in 1944–5 to get him away for farm training but he got into further trouble and was sent to an Approved School.

In the Borstal Institution he kept up a good correspondence with his relations and one or two female acquaintances.

When on licence and in the Army, he was stationed in B—— in June 1948 and the family was going to B—— for a holiday and hoped to see him.

It appears that in August he got into a spot of trouble during home leave. A diamond ring was missing at home and he was accused of taking it. Apparently there was not a scrap of evidence to support the statement. He was keen for the trouble to blow over but he wanted his name cleared.

By October 1948 he was serving overseas in Malaya and in January 1949 he wrote to the Associate to say his girl friend was going to have a child and his C.O. was trying to arrange for him to return to this country to marry the girl. The consent of his uncle was needed for this ceremony. In March the Associate learned the guardian would not consent to the marriage and the lad was in a very miserable state of mind. He wrote "a horrible letter" to the uncle and the Associate was of the opinion that this would finish the lad's relationships with the guardians.

In August nothing had been heard from the lad and the Army authorities were contacted and reported he was serving satisfactorily. He was demobbed in December 1948 and his licence expired.

Religion. Presbyterian—although his parents were orthodox Jews and he was a member of the Synagogue. He has never mentioned this and has expressed no desire to attend the Synagogue.

Social activities. Probation report: He has no hobbies or interests other than cinemas. Home Office Approved School report: He took an interest in the Sea Cadets. He had little aptitude for games. Not a good mixer. Borstal medical report: He is keen on running and swimming but not ball games. Home Office Approved School: Average intelligence. Progress and attainment below average ability. Good progress in Builder's Dept.

Type of work:

1948 (6 months), office boy. 12/6 per week. Did not like it.

1948 (3 months), labourer. Dismissed for fighting.

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1943–4 (few months), office boy. 15/6 per week. Sacked—slackness.
Short time, larceny. Butcher's errand boy. 14/- per week. Sacked. Absenteeism.
Catcher for 10 months in 1944. 25/6 per week up to conviction.

In Borstal Institution he said he was keen to join the Merchant Navy. Did labouring, painting and kitchen work in Borstal Institution.
Work habits. Duration of jobs and reasons for leaving as above. Borstal Institution work records: Able and adaptable. A reliable worker.
Failure score: 30·1 (correlation ·5, Approved School 8, not living with parents 7·5, longest job 6, highly industrial area 3).
Comment. This is an "over-achiever". He suffered from various handicaps: his parents died when he was a child, he stammers and is a bad mixer and absconder. On the other hand, he had a good home and was on good terms with his guardians, and he is intelligent.

VIII.22 *Case No. 12. Born*: October 1929.
Previous convictions:

5.38.	Shopbreaking and larceny.	B.O.O.R. Probation.
11.38.	Larceny.	Bound over to continue.
8.39.	Larceny.	To care of L.C.C.
5.45.	Larceny (2 cases).	Home Office Approved School.
7.46.	Officebreaking and larceny.	Home Office Approved School.
9.46.	Absconding from Home Office Approved School.	2 years' Borstal Detention.

Subsequent convictions:

1.49.	Absentee from Army.	Returned to Army. 28 days' detention.

Physique and appearance. Normal features with a somewhat defiant expression. Height 5 ft. 8 ins. Weight 182 lbs.
Health. Normal. (Peritonitis whilst in Borstal, operation for hernia whilst in Army.)
I.Q. Col. 85%.
Personality. Police report: a cunning thief and an inveterate liar. At Wormwood Scrubs: He complained of being underpaid.
Borstal history: Allocated to a "closed" Borstal Institution which at that time received mature and immature lads. Unsociable and aggressive. Refused labour. Very reserved and uncommunicative but improving. Fundamentally very sound and decent. Very temperamental and easily led. Absconded from Home Office Approved School five times. There is much good in him. He is sullen but more friendly as one gets to know him. He is fundamentally very decent and has a genuine sense of justice and fair play. He has never compromised with what he believed to be wrong. His bouts of depression and bad temper have become increasingly less frequent. He has a far saner and balanced outlook on life than the average lad dismissed from here. Has the ability to do very well. Housemaster's discharge opinion: A curious lad, moody and inclined to bad temper and rather unsociable. His habitual expression of face is sullen and disagreeable and his manner rather bitter and disillusioned. A loyal and just leader.
Discharged 10.3.49.
Home conditions. His father died in 1939. (Cancer.) His father died in 1945. When 14 years old he was hoarded out with foster parents (correspondence shows them to be reasonable and understanding people). The father was a rag and bone merchant. The boy's home had left. In September 1949 he was evacuated with school. He was found too unruly for an ordinary billet and was placed in a hostel for difficult children. He is the fifth of 7 children. One brother has been in prison and one brother has been in an Approved School.

Family relationships. The father was a very heavy drinker and cared little for his children. When he was at the Approved School he spent his leave with his married sister. She said she gave him every assistance but her kindness got nowhere. Now she will have nothing to do with him. His foster parents wrote to him in Borstal and wanted to send the lad a parcel. Mrs. —— said he had always been a good boy with her. On licence: He went straight into Army. He kept in touch with his foster mother. He wrote on one or two occasions saying he would be home on leave but on each occasion he failed to turn up. In March 1949 he went overseas and had not been heard of since (went abroad on Army service).

Religion. Church of England.

Education. Left school at 14 years. In top class. Character at school—good.

Social activities. An associate of young thieves. (Police Report.)

Type of work. Early 1944, shop boy for 3 months. Next 3 months, messenger at railway goods yard. (He was doing this job under the supervision of his foster father.) Was discharged when wanted by the police. He wants to be a clerk.

Work habits. He left his first job with a good character. He was also given a good character by the railway authorities. He was said to be sober and industrious.

Failure score: 34 (probation 4, Approved School 8, not living with parents 7.5, longest job 3 months 6.5, highly industrial area 8).

Comment: He had many disadvantages: a broken home, a bad temper, delinquent brothers, very early Court appearances. When evacuated as a boy of 10 he was found to be too difficult for ordinary billets. On the other hand, he is intelligent, has reasonable foster parents and was a good worker.

VIII.23 *Case No.* 13. *Born:* April 1930.

Previous convictions:

9.44.	Larceny.	P.O.A. and costs.
12.44.	Housebreaking. 2 cases larceny.	P.O.
6.45.	Larceny (3 cases). Housebreaking (10 cases).	Bound over 2 years. P.O.A.
10.45.	Housebreaking and larceny (6 other cases taken into consideration).	Home Office Approved School.
10.46.	Housebreaking (3 cases). Larceny (3 cases).	Returned to Approved School.

(Absconded four times from Home Office Approved School.)

1.47.	Escaping from Home Office Approved School.	2 years' Borstal Detention.

Subsequent convictions:

10.49.	Broke into gas meter (mother's).	Recalled—Portsmouth.
	Housebreaking.	6 and 6 months' imprisonment.
3.51.	Larceny in dwelling house. Wanted by police as suspected person—larceny.	
5.51.	On enclosed premises.	3 months.
5.51.	(Re larceny (wanted) he was remitted to Quarter Sessions for sentence. He appealed against this.	Was successful.)
3.52.	Larceny. Discharged—no prima facie case.	

Physique and appearance. Strong features. Contemptuous expression. Height 5 ft. 7 ins. Weight 140 lbs. Deformed right arm (badly set fracture when 3 years old). Medical Officer's discharge report: Re deformity—only a limited degree of fitness. Cannot lift anything with right arm. Average physique—not very sturdy.

Health. Operated on whilst in Borstal for appendicitis. Otherwise normal.
I.Q. Col. 57%.
Personality. Elementary School report: A rather solitary type at school. He always used his arm as an excuse. Many petty thievings were traced to him at school. When boys tried to be friendly with him, it lasted only a few days. He was rather low and cunning. Not particularly popular.
  Police report: No associates. Was always alone when committing crimes.
  In Home Office Approved School he went through the pockets of the football team whilst they were changing their clothes.
  When before the Court in 1946, having absconded from the Home Office Approved School, he complained about the nautical training he was receiving. He said the injury to his arm stopped him benefiting from this training and he could never go into the Navy. (He was, however, returned to the same school.)
  Probation report: A decent kid but very easily led.
  Home Office Approved School report: Untrustworthy—needed constant watching.
  Borstal History: Allocated to a "closed" Borstal Institution which at that time received mature and immature lads.
  January 1947. Weak. Keeps bad company.
  April 1947. Is responding quite well to discipline. He has applied for a change of house. No order advised. His cricket ability gives him some popularity. He is unfriendly.
  October 1947. Left party without authority. A fundamentally decent youngster who has struggled hard against the temptations of institution life.
  February 1948. Putting no positive efforts into his training.
  April 1948. His instability increases. Has a persecution mania.
  May 1948. Failed to return from home leave. Gave himself up on the 28th. Says he missed train and was afraid to return.
  July 1948. "Can I have my arm seen to?" August—sent to hospital, no treatment recommended.
  August 1948. "Can I have a book on fractures?"
  September 1948. Refused labour.
  October 1948. We have "shot our bolt" with him. Little hope for the future.
  November 1948. Refused labour. Can he go in painters' party? Yes, in due course.

  Discharged January 1946.
  Housemaster's discharge opinion: At the end of his sentence he is now showing a slight loss of mistrust of authority. Below average intelligence. A shy lad and has a sharp appearance. Did his 2 years at Borstal and still grins. My impression is that he will be in further trouble. He is very institutionalised—outside life holds little attraction. He is careful here but would be familiar, then insolent and would take mean advantage over anyone. Warped, lazy and unreliable. There is a restriction of the arm but he likes playing on it. A further 3 years are surely his.
  Governor's opinion: An unsatisfactory 2-year course. On licence he returned home to his mother and contacted the Borstal Association. In April he disappeared and he was next heard of when he broke into his mother's gas meter and was recalled subsequently for further training.
  November 1949. About his last offence he says: "I just wanted the money." He says neither the Approved School nor Borstal have touched him. The future is dim.
  January 1950. Failed to carry out orders. Refused to carry out orders. Irregular conduct. Obscene language.
  February 1950. Requested a private interview with the Governor. Granted. It was about his arm. He refuses to accept the report of the specialist that there is no point in attempting to re-set the arm. He is stubborn, selfish, foul-mouthed, unreliable and yet beneath it all he knows what is right and wrong.

No impression has been made on the lad. His future is very dark.

Second discharge Portsmouth, March 1950.

Kept away from Associate.

In July—prison and discharged in March 1951 (had lost his remission). March 1951. Associate says he is bitter towards all. Is developing a persecution complex. He is now entitled to a sum of money (£150) on reaching 21 years.

April. Has disappeared. Returns home on odd occasions. Associate can never get an answer. Notes are ignored.

July. Since being discharged from prison at end June, has made no attempt to get in touch with Associate. Untraceable.

August. Still impossible to make contact with either the lad or his mother. At the end of the month he was seen in S—— and he said he had received no messages. He is very bitter. Does not want friendship from anybody.

September. He is anti-social, bitter and has no sense of moral values.

Home conditions. Probation report: Home circumstances are fairly good. The house is on a new estate in the country and is composed mostly of migrants from M—— These migrants from M—— and S—— have not been well received or spoken of by the local residents. He started his criminal career with a number of other lads from the same estate. The home is clean and tidy.

Family relationships. The father was killed in the B—— football accident in 1946. The father had been in the Army from 1941 to 1945. The mother has a weak heart and cannot work. He has two brothers and one sister. The brothers (10 and 14 years) are living at home. The sister, aged 18, is on probation and is away in service.

The mother has no control. It is a fairly good home materially, but not a happy one. The mother is a rather weak woman and the family is evidently beyond her control. The sister gives a lot of trouble.

The lad is not strongly attached to his home. He speaks well of his father and evidently misses his control.

His mother visited him regularly in Borstal.

There was a good deal of domestic trouble in the home prior to 1940. The mother said since leaving school the boy has been restless. He became difficult at home and was easily led by other boys. She is willing to give him a good home. One other son also gives the mother a lot of trouble.

The mother had three operations in 1950 and lost the use of an arm. The Probation Officer was of the opinion that the lad's position was largely due to domestic trouble prior to 1940 and the difficult adolescent period when the father was in the Army. Borstal record: The mother completely failed to control the lad from the beginning. She has so thoroughly spoiled him that it is difficult to get any real help from the lad in his training in self-discipline.

Told Associate he wanted to go into lodgings and not to return home.

Religion. Church of England.

Education. Elementary School report: Reached top standard at school. Fairly quick at mental arithmetic. He entered reasonably well into school life. He played truant to go to golf courses where he could caddy (on three occasions he was warned off the golf course because of petty thefts). Probation Officer: Having regard to the unfriendly reactions of the estate inhabitants to migrants from M——, etc. he did well at school for the first few months. His work was very satisfactory. But he was easily influenced and became irregular and restless. He would not settle down to school life.

Social activities. At school: Solitary type. Keen on cricket. Mother: He liked sport—fishing and caddying. Borstal record: Is keen on football. (Letter from Governor to mother: "Every time he plays football he puts his arm out and we have had to stop him playing.") Has a marked ability at cricket.

Portsmouth record: He gambles a great deal on horses.

Probation record: He is not a good mixer. He was in the Boys' Brigade for a

short time. He later began to frequent billiard halls. He started his criminal career with a number of other lads from the estate.

Type of work. He wanted to go into the Navy but could not because of his arm.

First job. Apprentice sheet metal worker—5 months.
           Painter and decorator—3 months.
           In a drawing office—a short time.
           Painting and decorating—2 weeks.
In Home Office Approved School: Baking and kitchen work.
Borstal: Painting and decorating.
Licence: A washer in a textile mill.
         Caddying (in different parts of the country).

Work habits. Was dismissed from his apprenticeship because of absenteeism. Left next job of his own accord. Left the next painting and decorating job of his own accord. His mother thought he was still at work. At the Approved School he did fairly well but did not stick to his work. In Borstal he was considered to be a good tradesman. The Probation Officer was of the opinion he should be trained for clerical work or some light handicraft. The lad wanted to learn kitchen work so that he could get into the Army Catering Corps.

Failure score: 25·2 (probation 4, Approved School 8, highly industrial area 8, longest job 5 months, 5·2).

Comment: His bad points are his history of persistent crime, his absconding, and his physical handicap and "persecution mania".

CLASS D (1 CASE)

VIII.24   Class 14.   *Born:* April 1927.

Previous convictions:

5.36.	Larceny.	Bound over 12 months' probation.
4.45.	Larceny.	Fined £1. 17/6 costs.
7.47.	Shopbreaking and Larceny. (3 other cases.)	3 years and 3 years concurrent in Borstal Institution.

Subsequent convictions:

4.49.	Wilful damage.	£5 fine. 10/- costs.
5.49.	Drunk and disorderly.	£2 fine.
5.50.	N.A.A.F.I. breaking.	3 years' corrective training.

Physique and appearance. A sullen and defiant expression. Well proportioned. Height 5 ft. 3¼ ins. Weight 122 lbs. A bad scar on forehead.

Health. Generally fit but cut for extremely heavy work. His bearing is affected by chronic otitis in left ear. Suffers from psoriasis on arms and legs. Was involved in an accident in a pit in 1948 when both his arms and both his legs were fractured and he sustained head injuries.

I.Q. Col. 59%. *Allocation Survey:* Rather dull and backward mentally.

Personality. Prison neurotic. *Report:* July 1947. Probation Officer remarks on his drinking and gambling. His probation period was satisfactory. Governor's remarks on reception: Living on compensation and dole (£2 per week). In urgent need of discipline. Would not get a job because he would lose his £1 compensation. This lad likes the easy way.

Borstal history. Allocated to an "open" Borstal Institution for mature lads. A cheerful little comedian who could be quite a handful if he were not on our side. Working well and appears to have settled down. November 1947. He had a bad spell for a few days but is now back to normal and working well. A cheerful and pleasant lad. April 1948. Appointed to be a leader. Not able yet. Granted home leave.

Discharged August 1948 to mines. A sound youngster although rough and ready.

Discharge reports. Governor's opinion: A cheery soul with a sense of humour. He should do well.

Housemaster's opinion: Cheery and with a quick wit. A bit lazy. A good mixer but no leader. He is friendly and co-operative and has a lot of common sense.

Home conditions. His mother died when the lad was 15 years old. He left home and went into lodgings.

Extract from letter sent by his elder brother to the Governor of Borstal Institution: " . . . my father sold all the home off and gave up the house and left him without a roof over his head or a bed to lie on and he has just been knocked about."

Family relationships. Housemaster's report: He does not get on with his stepmother, who lives with his father. He wants to live with his sister-in-law, who will have him (they get on well together).

Further extract from letter sent by brother to Governor: " I have not been able to help the lad because my home was bombed to the ground and I have had to live with my wife's mother. I hope to have a house of my own by the time he comes out so that me and my wife can look after him. I have four children of my own and he knows my wife will do all in her power for him."

The sister-in-law wrote saying: " I am going to try and do my very best to keep him on the right path."

(The goods stolen by him, and which offence he was committed to Borstal, were received by a brother aged 34 years and who was accordingly charged with that offence. No reference is made elsewhere to any other siblings but a brother.)

Probation report: July 1947. The father has separated from his second wife. (He has " retired " and his address is unknown.) He does not take any interest in the lad. The boy's mother died 5 years ago. He lived with his father for some time but they did not get on well together. He has since been staying with relations for short periods.

Religion. Church of England.

Education. Left school at 14 years. Housemaster's report: Educational standard not very high.

Social activities. Police report: He associates with persons of fair character. Probation report: July 47. He associated with youths of undesirable character. He frequented billiard saloons, fond of drinking and gambling.

In May 1949 he was fined for wilfully damaging a fence. This came about because he was spending his spare time with a girl friend and they came to have a disagreement. He went drinking and later damaged the fence of her parents' house. He was warned to keep away from the address and he promised to abide by this instruction.

Three weeks later he was again arrested at his late girl-friend's house. He again promised to stay away. Four days later he was fined for being drunk and disorderly.

June 1949. Enlisted in Army.

April 1950. Magistrate's Court. N.A.A.F.I. breaking—remanded.

May 1950. Assizes. 3 years' corrective training.

Type of work. Was a pony driver in the mines until his accident when he was 16 years old. This was the only job he had. He has not worked since 1948. He was given a light job when he recovered from his accident but he could not manage it.

Alienation Survey: He is fond of working with horses.

In Borstal Institution he was put on light labouring jobs. He also did hospital orderly work and obtained a St. John Ambulance Certificate.

His housemaster reported that he wanted to go back into the mines upon his release and to work underground if possible.

In July 1948 the Ministry of Labour and National Service informed the Borstal

authorities that he had been accepted for coal-mining at H——. On discharge
from Borstal he returned to the mines and left when he enlisted in June 1949.

Work habits. Housemaster's opinion: A bit lazy. Record on licence: Had not
missed a shift during first month. Made good progress up to joining Army.

Failure score: 44·5 (probation 4, fined 9, with parents 7·5, evidence of
drink 24).

Comment: The statistical prognosis is borne out by events, against the Governor's
favourable opinion.

CLASS X (2 CASES)

VIII.25   *Case No.* 15.   *Born:* March 1928.

Convictions:

1.40.	Larceny (2 cases).	Bound over 1 year J.R. to 1.1.41 then dis. P.O.A.
10.41.	Shopbreaking and larceny.	Probation 1 year.
10.42.	Stealing.	Bound over 1 year.
3.43.	Stealing (3 cases).	J.R. 1.9.43, then dis. P.O.A.
9.44.	Stealing.	Fined.
9.45.	Stealing (3 cases).	Fined each case.
11.45.	Stealing.	6 months' imprisonment.
	(Once summarily for obstructing police.)	
6.46.	Shopbreaking and larceny.	3 years' Borstal Detention.

Physique and appearance. An unhealthy, lethargic, expressionless face. Height
5 ft. 9 ins.   Weight 164 lbs.   Tattooed on forearms.

Health. Good.

I.Q. Col. 57%.

Personality. Police report: He is of lazy disposition. Probation report: I
found him untruthful, lazy, insolent. He was brought back to the Court for failing
to pay a fine of £8 for stealing land. He has a particularly bad record for a lad of
18 years. He requires long-term training.

Leeds Prison Reception report: Absentee from Army. (He was called up in
April 1946, served 8 days in the Army and deserted. Has been on the run.)
Poorish I think.

Chaplain: A rather unsettled nature, lacks concentration, in need of prolonged
training to stabilise him.

Wakefield Prison Reception report: Shows a co-operative side and has some good
stuff in him.

Borstal Reception report: He is of lazy habits and fond of dodging work.
Badly in need of disciplinary training.

Wormwood Scrubs, June 1946: Shouting through cell window. 2 days No. 1
diet. August 1946. Has steadily improved in his work. Co-operative reliable
worker. Made leading lad in his mess. Trustworthy.

Borstal history: Allocated to a "closed" Borstal Institution for mature lads.

October 1946. Work and conduct good.
November 1946. Has worked well. He is weak but he learns.
December 1946. Work poor. He is very moody.
January 1947. Work and conduct very good.
February 1947. Special grade. Shows interest in his work and on the whole
his conduct is good.
March 1947. Conduct good—works well.
April 1947. Conduct good—works well. Coming along nicely.
May, 1947. Conduct good—works well.
June 1947. Conduct good—works well. A very useful lad.

July, 1947. Conduct good—works well.

August 1947. His conduct at times is an example to the other lads.

September 1947. Fundamentally weak—although decent enough in himself.

Discharged October 1947. (To Army.)

[Borstal Associate writes: He may not wish to receive letters from Borstal Association so will not write unless I hear from him.)

Home conditions. Police report: Clean and tidy.

Family relationships. Wakefield Prison record: His mother is dead (she died from cancer in 1943) and he lives with his father on very poor terms. His father describes him as lazy and drifting fast (from petty thief to shopbreaking).

Borstal records: He lost his mother about 3 years ago. His father is respectable and has turned the lad out of the house on a number of occasions after having failed to persuade him to conduct himself in a better manner. Housemaster's report, June 1947: His a married sister living at home. They seem a very happy family. Police report, June 1946: He is not on good terms with his father, brother or sister, with whom he resides, due to his lazy habits and the fact that he is nearly always in trouble for thieving.

Probation report: The father is respectable and hard working. He has made an effort to help his son. The father has on more than one occasion turned the son out and is not really willing to have him back.

Elementary School reports The mother is deceased and a sister states that the father wishes to have nothing further to do with him. The lad's sister would be willing to help him when he is released. He corresponded with father, sister and male and female friend. On 24.10.47 the father wrote to the Borstal Associate to inform him the lad was on leave and that he had made a promise to his father that he would do his best. The father went on to say that the mother had had a great influence on the boy but that she had died during the war.

Religion. Church of England.

Education. Left school at 14 years. Elementary School report: Left in Standard VII. Was below average in ability but capable of good work when he applied himself to it; otherwise, he was extremely lazy.

Social activities. Police report, November 1945: Has been associating with thieves and persons of doubtful character for the past 5 years.

Police report, June 1946: He associates with thieves and prefers to hang around street corners rather than obtain and continue with regular employment.

Probation report, June 1946: Is not interested in any form of youth activity. Spends his time in billiard halls and cinemas and public houses. Associates with others well known to the police.

Wakefield Prison Reception report: A lazy insolent street-corner boy. Borstal Governor's comment, September 1946: Fond of attending billiard halls and drinking.

Type of work.

Police report, June 1946:

Lorry driver—3 months.

Worked for timber merchants—6 weeks.

Worked for dairy farmer—2 months.

Worked in manure works—8 months.

Horse driver for carters for 3 years (left own accord).

Horse driver for carters for 1 year.

Joined Army 18.4.46. Deserted 2.5.46.

Probation report, June 1946: He had long periods of unemployment.

Work habits. Police report, June 1946: He was described by his employers as a good worker when at work but took several days off without any apparent reason.

Police report, November 1945. His employers have described him as lazy and

very unsatisfactory.   Sometimes he has turned up at work at 10 a.m. when he should have been there at 7.30 a.m.

Failure score: 21 (probation 4, fined 9, highly Industrial area 8).

Comment: In spite of his handicaps, a history of early delinquency, a broken home, laziness and casual work habits, he has not relapsed.

VIII.26   Case 16.   Born: March 1930.

Previous convictions:

9.39.	Store breaking (2 cases). Shopbreaking (2 cases). Larceny of bicycle.	Sent to Waifs and Strays Home.
1.45.	Burglary.	Bound over £5. 12 months.
12.45.	Embezzlement (1 case taken into consideration).	Bound over £5. 12 months' Probation.
10.46.	Housebreaking and Larceny.	3 years' Borstal Detention.

Physique and appearance.   Well proportioned features and weak expression. Convergent squint.   Vision right eye practically nil (had operation for this and a persistent headache when relieved).   Height 6 ft. 0 ins.   Weight 176 lbs.   Big for his years.

Health.   Normal.   Should not be exposed to inclement weather.   Chest trouble needs watching.   Chronic situation not too good.

I.Q.   Col. 75%.

Medical report (Borstal):   Slow and dull.   Housemaster (Borstal): He is fairly intelligent.

Personality.   Waifs and Strays Home: Absconded once because the boys called him names.   A sneering cynic.   Untruthful, looked on police with scorn.   Prison Chaplain: He is a weak and bad character and easily led astray.   Requires discipline.

Police report: His character is bad.

Probation report: There is a tremendous lot of good in the lad.   He has probably committed his offences to bring his position to the attention of others.   This attitude is brought out by his surrendering to the police in L— for offences committed in P—.   Allocation Survey: Needs a fresh break and a lot of help.   He seems a pretty decent chap.   In the Home for Waifs and Strays his conduct was good but he was inclined to be untruthful.   A lad who has had little to help him keep straight, except when in the Waifs and Strays Home.   He had no help from his mother and had a brother who led him astray.   Quite a nice lad and might easily have had a worse record.

Borstal history: Allocated to an "open" Borstal Institution for immature lads. November 1946.   Very sorry for himself.   Has had poor home conditions.   Little strength of character yet.   Friendly and well meaning.   Will respond to kindness. Not a leader.

March 1947:   Puts up a screen of independence which amounts to a deep-rooted suspicion of others.   He is fairly intelligent.   His arrogant aloofness amounts to a lack of self-confidence.

May 1947.   He has gained steadily in strength and wisdom and is more co-operative.   He is interested in his work and is reliable and responsible.   A lad leader in the kitchen.   He has found the security he so much needs.   His childish obstinacy still appears sometimes but he can now accept reason.

July 1947:   He his eye operation—his attitude towards waiting for an operation in a cell at W— was very encouraging.   He is happy to be back but rather subdued in his dark glasses.

September 1947:   He is conscientious, thorough and reliable in his work but has not yet learned to live with other people.   He has a great deal of ability and enthusiasm but spoils it by a lack of moderation and humility.

November 1947. He has made a great effort and shown that he can combine tolerance with ability and has recognised a sense of duty to others as well as himself. Improvement has been even greater lately since he returned from a home visit to "Blighty". He has responded well to becoming a leader. Showing himself to be thoughtful, enthusiastic, level-headed and capable. Is more open.

Discharged 10.2.48.

Housemaster's discharge opinion, December 1947: Has a good sense of humour, a friendly approach and a kind disposition at bottom. Not a strong character. The independence he tried to force on himself showed itself as an arrogant deliberate aloofness and made him unpopular and caused him to seek support without giving anything in return. He became more co-operative but at times was childishly irresponsible and obstinate and could not accept criticism of any kind. He had his own rules and was intolerant of others. He wanted respect but was not prepared to give it. He had a great deal of stability and initiative and a great enthusiasm to make something of his life, but until recently his sense of duty has been to himself. What confidence he had made him self-satisfied. He needs to learn that genuine independence carries with it belief in other people.

Governor's discharge opinion: He finds it hard to fit in with and tolerate others. He is old for his years and quite satisfied to spend hours on his own in the kitchen.

Home conditions: Mother living and working in a common lodging house (in the poor harbour and market area of the town). She earns very little money.

Borstal medical report. There is no doubt that the home environment is extremely adverse in this case since the mother works and lives at a lodging house and there are no real home facilities.

Allocation Survey: A shocking background. The lad has practically no home. For a time he lived in the lodging house with his mother when he was expected to wait up at night to let the men in. There was also some trouble with the owner of the house.

Probation Officer: Mother occupies two rooms in a lodging house. Character of home and relationships—poor.

Family relationships. Allocation Survey. No help from his mother and has a brother who led him astray. He did the burglary job (January 1945) with his brother. Brother ex-Home Office Approved School and in Borstal (at time of Allocation Survey report). At 6½ years he was in trouble for stealing with his brother, then aged 8, but was too young to be brought before the Court. The brother was placed on probation. Although the mother writes to him occasionally, since the Borstal sentence she says she does not want him back home. The lad hates his stepfather. He has had a pretty rough time. When he was 14 years old. the mother asked for him to come home from the Waifs and Strays Home. He was very restless (had about 30 jobs before going to Borstal) and this seemed due to his bad home conditions. He could not get on with his stepfather and a period in a C—— Hostel was tried but he refused to settle down and was sent home after 6 weeks.

Borstal reception report: After a most unhappy 9 years of home life he was sent to a Home for Waifs and Strays as a result of his first offence. Here he found a certain security in the very strict (and apparently rather cruel) discipline of the place. (The Waifs and Strays Home reported: He was big, strong and rough and dirty and a thorough "grouser". He never ceased to tell anyone of the bad time he had at home. His father died whilst the lad was here.) There is a family of 11 children. His father was separated from his mother and he died in 1938. The stepfather has tuberculosis and is in prison. One brother aged 19 is in the Army. One brother, 18, ex R—— P—— and Home Office Approved School. Two younger brothers in orphanage. One sister and half-brother with mother. One brother, one sister and two half-brothers dead (the sister, aged 3 years, was scalded to death 3 months ago). The mother is not interested in the son nor in her—although he did for some time want to keep in touch. He does keep in touch with the brother in

the Army. Borstal medical report: It is understood there is a separation order operating between the stepfather and the mother.

Governor (Borstal): "My sister's magisterial duties in the same town have caused her to be in touch with this family for many years. The home has little to commend it and he should not return there. He has been a difficult lad temperamentally and there is no doubt that this is due to his unfortunate home background."

On his release from Borstal he was sent to a home in R——. He was very unhappy and wanted to return to his home district. The necessary arrangements were made. He left after a few days (was described as ungrateful and a "know-all"). It was difficult to find him accommodation in the P—— area (he was going into the hotel trade but this did not start until about Easter). On 23.2.48 he had to return to his mother's address. In April he was working and living in a hotel. In May he intended to marry a girl who was a minor and who knew about his past, and the mother was agreeable to their marriage. There was to live in her mother's house.

In July he and his wife were working in the same hospital and seemed very happy. He also seemed to get on better with his own mother.

In November this wife were expecting a baby. One year later, in November 1950, there was domestic trouble because he became involved with another woman and wanted his wife to enter into a deed of separation. His wife is still fond of him and has so wish for him to leave. (Wife had a son in February 1950.)

Religion. Church of England. He has been confirmed but has been irregular in his churchgoing since.

Education. He did well at the Senior School. He made good progress and maintained a good position. In the Waifs and Strays Home he reached the top form and made good progress.

Social activities. Police report: The characters of his friends are bad.

Probation Officer: He has always refused to join a Youth Club. It is curious that on two occasions he has gone to L—— (on the second time ostensibly to get work in the docks) and given himself up to the police.

Remand Home: His associates are described as bad.

Borstal medical report: The crime for which he was sent to Borstal was carried out with two others at a time when he was unemployed and on probation.

Housemaster's opinion: He wants to do pastry cooking and learn French at evening school.

Type of work. Allocation Survey: The types of work he has tried—

Farm work (after training in a hostel)—left because too cold.
Coal delivery.
Kitchen boy in hotels.
Saw-bench work.
Labouring of various types.
Errand boy on different occasions.
Following release from Borstal:
February 1948. Labourer (for one week), then house porter in hotel.
March 1948. Labourer (few days).
April 1948. Assistant cook in hotel.
July 1948. A cook in a hospital. Left February 1949.
May 1949. Back in hotel work.
August 1949. Employed as a kitchen porter.
November 1949. Now employed as a storekeeper in the same place.
February 1950. A salesman on a mobile fish van.
September 1950. Worked for a dairy from 6 a.m. to 1 p.m. and on the mobile fish van from 3 p.m. to 11 p.m.

Work habits. In the Waifs and Strays Home it was said he did a good and work-manlike job. He left his farm work because it was too cold. He left coal delivery

because his mother's employer disliked him coming home dirty. He left one job as a kitchen boy because the chef left, and another because he could not "live in" and he was a long way from home. He was dismissed from the saw-bench job because of laziness.

Police report: In 2½ years he had 20 jobs and in most cases left of his own accord before his character could be assessed. He was frequently absent from the saw-bench job. The butcher who employed him as an errand boy said he was very slack and had to be driven. He was dismissed for dishonesty. He was employed due to staff shortage in the first instance, when he relieved his brother who had worked for the butcher for 2 years before he was called up.

Allocation Survey: He had 20 jobs without continuity (seemed to keep a job never more than 2 months and sometimes only a few days). He has twice gone to L—— after committing some offence, saying he was looking for work but has given himself up to the police on arrival.

Probation Officer: He should be up to better work than labouring. Cooking seems a likely alternative and it would give him a trade where he could get living-in jobs.

Housemaster: He is interested in cooking. (His eye may make him unfit for the Army.) He is practically blind in his right eye.

Governor: As a worker he is steady and reliable and has initiative.

After Borstal discharge: On his discharge he was referred to the Juvenile Labour Exchange so that if he were registered as a disabled person, after the necessary examination, he could be submitted for a cookery course. On different occasions he was supposed to report to the D.R.O. as a disabled person but in September 1949 it was not known whether he had yet done this.

At first he did not seem able to settle in any job. He refused to give a reason for leaving his labouring job in March 1948. In February 1949 he was "put off" the hospital work because of a change of staff. His conduct was said to be good. When employed by both the dairy and the mobile fish van concern, he was said to be working very hard indeed and was earning approximately £14 per week.

Failure score: 14·1 (probation 4, not living with parents) 7·5, longest job 12 months 2·6).

Comment: A long history of delinquency, physical handicaps, a broken home, delinquent brother, but no relapse.

2 CASES NOT INCLUDED IN THE STATISTICAL STUDY

VIII.27 Case No. 17. Born: March 1929.
Previous convictions:

9.42.	Stealing growing fruit.	P.O.A.
7.46.	Receiving.	Bound over. P.O.A. and fined.
6.46.	Wandering as servant (3 cases).	Bound over.
10.46.	Housebreaking.	3 and 3 years' Borstal Detention
	Attempted housebreaking.	consecutively.

Early 1948. Fined for insulting behaviour.

Physique and appearance. A weak dissolute face. Wearing an American style "tough-boy" coat. Height 5 ft. 6¼ ins. Weight 142 lbs.

Health. Fit.

I.Q. Col. 36%.

Medical report: Sub-average intelligence.

Personality: Elementary School report: He has never been really honest or industrious. Never deserved a good character. Probation report: Has been difficult to supervise because of his attitude of independence and self-confidence. Deludes himself that he is "a bell of a fellow". Attitude to probation has varied from indifference to truculence. His reporting was unsatisfactory. Changed

Put blame on others for his Court appearance. Police report: He is a very arrogant individual who would not hesitate to take advantage of any person with whom he comes into contact. Ready to say anything to get out of his troubles. Spoilt. Seems to do much as he likes.

Borstal history: Allocated to an "open" Borstal Institution for immature lads.

January 1947. Sophisticated lad. Has grown up too quickly. He responded better than expected because in early days he resented authority.

April 1947. Slacked off a bit and accordingly taken out of the kitchen. The change is good for him.

June 1947. Satisfactory.

August 1947. Much better lad now.

Discharged February 1948.

May 1948. Army. Seems happy. Recently fined £1 for insulting behaviour.

September 1948. Reporting regularly.

September 1949. Expected back in England soon (November).

January 1950. Got work as a labourer.

October 1950. Finishes licence. O.K.

Home conditions. Probation record: Adequate rooms in house. Police report: A comfortable working-class type of house which is reasonably well furnished.

Family relationships. Police report, May 1946: The father has been in the Army since 1942. The lad appears to be on good terms with his parents.

Probation report: The mother is respectable, hard working and well intentioned. (The father was not known to the officer.) The lad is on good terms with both. Report by Probation Officer previously handling the lad: The parents are separated, the father living in P——. Wormwood Scrubs record: He lives with his mother on good terms but parental control during the father's absence in the Forces has not been effective.

Reception report: A comfortable working-class home and he is on good terms with his widowed mother. The lad says his father has been in the Army for the past 4 years and is now in Palestine. (There is no correspondence sheet in file to show whether the lad ever wrote to his father and if so where.) Has one older brother, three younger brothers and one younger sister. By November 1950 the lad was married and his wife had a baby (seemed very happy).

Religion. Church of England.

Education. Elementary School report: No special ability. No defects to hinder ordinary development.

Social activities. Elementary School report: Spent much time in billiard halls and cafés. Probation report: His absorbing interest is motor-cycles. Very keen to enter Army. Mother: Spent time digging the garden and helping me in lots of ways while father was in the Forces. Wormwood Scrubs report: He associates with undesirables.

January 1950. Had got a girl friend and expects to marry her.

August 1950. Marriage seems to work. Wife knows all about husband.

Type of work. Many labouring jobs since leaving school, mostly on bomb sites.

Labourer 5 weeks, 39/- per week.

Labourer July 1945 to February 1946, £7 to £9 per week.

Labourer February 1946 to April 1946, £3 and bonus per week.

Electric van driver 2 months, £5 per week.

Labourer until arrested, £4. 10. 0. per week.

Work habits. Left first labouring job above on own accord. Discharged from electric van driving for insubordination and absence.

Comment: If he had been included in the statistical investigation, his failure score would have been 16·0 (probation 4, fined 9, longest job 9 months 3·0), i.e. Class X.

VIII.28 *Case No. 18. Born:* September 1929.

Previous convictions:

8.43. Larceny.	Dismissed P.O.A.
9.44. Larceny.	Bound over 3 years. P.O.A.
8.45. Larceny (of revolver).	Home Office Approved School.
1.47. Storebreaking and larceny. (Escaped 6.47.)	3 years' Borstal Detention.
6.47. Stealing.	Returned to Borstal Institution.

Subsequent convictions:

3.49. Stealing.	1 month's imprisonment (recalled for Borstal training).
8.50. Stealing (20 other cases taken into consideration).	3 years' imprisonment.

Physique and appearance: "A poor undersized midget." Lots of tattoo marks on both arms down to the back of his hands. Good features. Slightly coy expression. Height 5 ft. 8 ins.

Health. Normal.

I.Q. Col. 65%.

Personality. Probation report: He is a boy with low standards of conduct. He suffers from some sense of inferiority due to his small size, which tends to make him rather aggressive. Home Office Approved School: Of low character. Resentful of discipline. An exhibitionist anxious to demonstrate his smartness. The boy said he could not get on with the other boys, who despised him because he was so small, that is why he absconded ten times. Allocation Survey: Re first charge: said he had no fur to school. Re second change: (stole a bicycle) said he was "on the run from home". "Had heard about London." Third charge: He stole the revolver for another lad who gave him 5/-. Fourth charge: Was "on the run" from Home Office Approved School. He thought nothing of his ten escapes from Home Office Approved School. He can be quite aggressive as a form of compensation for his smallness. He is very easily led and very unreliable. Will dodge the column if possible. Home Office Approved School character: "One of the worst I have met, deceitful, underhanded, suave, a bully, dirty-minded and a constant source of trouble."

Borstal history: Allocated to a "closed" Borstal Institution for immature lads especially absconders. He was punished on different occasions for using obscene and filthy language to an officer, for absconding (twice) and for fighting.

September 1947. He has had a strict time here—always coming up against it with staff and lads alike. Has been advised to "grow up" and take things a bit seriously.

December 1947. A remarkable change. Is really becoming steady.

March 1948. Has proved beyond doubt that he can be a good lad if he tries. Has developed a strong personality. He is an excellent leader and his group is the leading group in the house. Has got very careless. Is in with a clique. Lost his leadership. Has reached a stage where he either makes good or drifts.

October 1948. Working reports are good. He requires to be constantly occupied to keep out of trouble.

Discharged December 1948. Housemaster's discharge opinion: Of average intelligence with strongly marked emotional traits. Childishly petulant, he will cry scream, kick and raise hell because of no letter from home. The most sloppy young man we have ever had. He will always promise to turn over a new leaf (until the next time).

April 1949: Received Portsmouth. On his discharge he went home and everything was very happy. He said he took half a day off from work to go with another lad who was on probation to the W.V.S. to collect some clothes. On the way out he

took four pairs of trousers to pawn. A young twister despite the outward signs of penitence and shame.

Has been punished for refusing orders, threatening officer, injury to officer when resisting arrest. Had a stubborn fit when he would not work—then bursts into tears and says his girl is pregnant, he does not know what he will do if his father attempts suicide again, etc., he will be blamed for it, etc.

September 1950. This man is not recommended as suitable for further recall to this recall centre.

Home conditions. Has three brothers and two sisters at home. Two brothers and one sister married. The family lives in a council house. The home is reasonably clean and fairly well furnished but rather untidy. He is the tenth child of a family of 13—9 of whom are living. The house is on a corporation estate.

Family relationships: Police report: He is on good terms with the family. The father is a neurotic. Every time the lad gets into trouble, the father attempts to commit suicide. The father has not worked for some time (November 1949). The father had been a shoe operative. He used to be very strict (although the lad appears to be on good terms with the father). The father was very strict with three older brothers, but once the neighbours complained when he was punishing a boy too severely. Since then he has let them go their own way. The father tried to commit suicide when he heard that the lad has been committed to an Approved School. The police were called but took no action. He was in hospital for about 14 days.

Three older children died at birth. Married sister aged 21. Two married brothers aged 25 and 22—all living away from home.

At home—brothers aged 19, 18 and 14; sisters aged 11 and 9. The boy once stayed away from home and was reported missing to the police.

The lad now wants to go back home very much. He is closely attached to the family. He has a girl friend (has known her for 2 years) and they mean to stick to each other. The parents are very concerned about his exploits.

Religion. Church of England. He attended Sunday School up to 14 years. Was confirmed in Home Office Approved School.

Education. At school he was said to be of average attainment and have no special ability or defect. He often truanted to train in boxing.

Social activities. He took up boxing when he was 8 years old. He used to lose schooling in order to train. He has boxed for several clubs and is very keen. He attended a Youth Centre occasionally but mostly spent his time with youths of his own age who were resident on the housing estate where he lived. On several occasions he, with other lads, slept out at night. They were often in mischief and gave considerable trouble.

In Home Office Approved School he was in the Army Cadets and also played a lot of football.

Type of work.

Worked for hosiery company for 6 months.
Errand boy (2 months).
Packer (2 months).
Salvaging rubber (3 weeks).
Professional boxer for 1 year (1944?).
Home Office Approved School: Did a painting course.
Licence: April 1949—paint sprayer, £4. 10. 0. per week.
November 1944. Volunteered for armies ("Medically rejected," he says); volunteered for Army (not accepted).
April 1950. A general hand.
September 1952. A painter.

Work habits.

Left first job own accord—wages too low.

Left next job—was unsatisfactory.
Lost next job—was unsatisfactory.
Lost next job—dismissed for swearing.
Home Office Approved School: A work dodger.
Borstal record: He is not very truthful about his work. He wants to make an impression, therefore it is not easy to check on what he has done. He says he means to stick to painting. He was a work dodger and very unsatisfactory, but he has a good opinion of his own work.

Comment: If he had been included in the statistical investigation, his failure score would have been 17·2 (probation 4, Approved School 3, longest job 6 months, 5·2) Class X.

VIII.29 Concluding remarks.

The material at our disposal does not enable us to develop any sort of typological pattern, and in particular no typical combinations of factors have emerged. Moreover, while in some cases there appeared to be complete conformity between the statistical classification and the impression obtained from a study of the case record, a few exceptions could be noted where statistical and individual case study seemed to yield different results. The details given above of Case No. 2, for example, would hardly enable the reader to expect classification in the most favourable category A, nor would Case No. 14 seem to deserve classification under category D.

As would be expected, the most outstanding characteristics of our case material are bad home conditions and family relationships, educational backwardness, absence of constructive leisure activities and poor habits of work. In addition, a surprisingly high proportion of these various physical defects has been encountered.

VIII.30 An attempt to classify 44 of our 46 cases according to whether, regarding certain important factors, they seemed to show the characteristics normally found in lads from the same socio-economic background gave the following result (n= normal, a=above normal, b=below normal):

	a	n	b
Physique	1	24	19
Health		35	9
I.Q.		37	7
Home conditions		20	24
Family relationships		10	34
Religion	3	41	
Education		5	39
Social activities		10	34
Type of work		33	11
Work habits		17	27

These figures show that, even taking as the yardstick the socio-economic conditions from which these lads came, they were below the average 204 times and above the average only 4 times out of a possible 440 (average 232 times).

SUMMARY OF CHAPTER EIGHT

S.VIII.1   In the first part of this chapter the objects of including individual case histories in prediction studies are reviewed, and it is shown how such histories have actually been used in previous studies, i.e. mainly in order to make the statistical presentation more colourful and to illustrate differences between various types of offenders. Other objects, which have so far been neglected, are to use case histories to explain the various statistical score

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classes of success and failure and to demonstrate the variety of factors which, combined, may produce the same statistical score; to work out a typology of cases related to the various score classes; and to make a special study of atypical cases, i.e. cases who, in spite of favourable statistical scores, actually become failures and vice versa.

S.VIII.2   In the second part of the chapter, brief histories are given of 18 cases, grouped according to their statistical score classes, and it is stressed that the quality of the records made it impossible to work out any kind of typology.

A Note on The Future of Criminological Research

IX.1 Every new research project should end by adding something to the pool of knowledge previously possessed, and should, therefore, have some effects upon the planning of future research. It seems that it might be desirable for us to take stock of the results and experiences arising from this project, noting particularly where the possibilities and limitations of the techniques used in this study might have any meaning or utility in the future.

THE FINDINGS OF THIS PROJECT (METHODS)

IX.2 We have, throughout this report, put on record a fair quantity of data which has little direct meaning in this project because we considered that it might be of value in the future in a negative way—it might help in preventing others spending time unprofitably. The results of this project have, however, not been entirely negative, particularly with respect to methodology. It is in methodology that we would consider we have been able to make our main contribution. In summary these methods are:

  (i) It has been shown that optimum weighting (with avoidance of over-lapping of the counting) affords a more efficient prediction instrument than the methods used in earlier criminal prediction studies. A method for combining the two basically different types of data has been found which produces practical results. (See Appendix III.)

  (ii) The unpredictable group, which has resulted both in previous studies and originally in this project, has been found to be susceptible to further analysis and prognosis. Factors relating to personal differences may, it seems, *after the extraction of the more weighty factors relating to past criminality,* break up this centre group. In future studies this should be planned for and the projects designed accordingly.† (See Chapter VI, paras. 68–7.)

  (iii) The utility of experience tables has been tested by "reflecting the results backwards" from the procedures, events and treatments and thus a quasi-experimental situation, after and out of the normal events of criminal law and administration, has been created. Since the more usual experimental designs are generally regarded as impossible in the field of human behaviour, this technique seems to have possibilities of development and wider application in criminology. (See Chapter V, paras. 128–56.)

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* That is the solution of equations by separating the attributes from the variables, solving for attributes (using probits) and producing an artefact variable from the attributes; then solving for variables (including the artefact). The reduction of these processes, by recombination into a single score, provides a simple system of prognosis combined with high efficiency.

† There will still be a "central group" after the secondary prediction, but it will be very much reduced in size, since we shall then have only those whose personality factors and past criminality factors result in their having equal chances of failure or success. No centre group emerged from our analysis because the numbers were too small to withstand more than a dichotomy of the "unpredictable" group from the first equation.

(iv) A system has been worked out whereby long periods of follow-up may be found to be unnecessary, and by means of which, in any circumstances, it will be possible to test when (and to identify as soon as) the follow-up period has been adequate. This procedure also seems to have possibilities of wide applications.* (See Chapter VI, paras. 42–50.)

(v) It has been shown that the need to ensure that the experience tables remain up-to-date for prediction may best be arranged by a system of continuous sampling possibly involving variable fractions. By this means the fact that the prediction system may be "drifting" with changes due to time trends will be noted immediately it occurs. The expense of testing by reworking the tables at intervals may thus be avoided together with the attendant risk that the large-scale tests might not take place until some time after the prediction system had broken down. (See Chapter IX, paras. 21–8.)

(vi) It has been established that those factors which discriminate between delinquent and normal populations do not always discriminate between successive classes of delinquent. This has a direct bearing upon subjective judgments. (See Chapter V, para. 89.)

IX.3 Before we list the more practical and direct findings, some comment on the methodological results may perhaps be made. If we might underline one result which seems to be of more importance than any other, it would be that relating to the period of follow-up. (Item (iv) above.) Although it was possible to work out this idea only partially, it has become clear that the amount of extra information about extra follow-up time provides can now be estimated. The amount of information does not bear a simple relationship to the number of new cases which might fail, but falls far more rapidly. Thus in this project the difference between 1 year's follow-up (when about 50% of the "failures" had failed) and 3 years (when 80% of the "failures" had failed) was not significant. In future it should be possible to curtail follow-up as soon as the equations become sufficiently stable. The ways in which this result might be applied seem to be both of importance in securing economy in research and in increasing its efficiency. The problem of securing an adequate follow-up criterion and at the same time ensuring that the experience is not out-of-date when applied, has always been a serious one. The application of this technique in other branches of sociology and psychology seems also to offer numerous advantages.

FACTUAL FINDINGS OTHER THAN METHODOLOGICAL

IX.4 Our conclusions in respect of results which do not emerge only as methodological are more tenuous. This is mainly because of the difficulties of securing sufficient basic data. Those of immediate and practical importance which may be fairly firmly established are—

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* This system will be recognised as the application of a type of sequential method to multiple regression techniques. It is, in effect, a system of predicting the mean or origin of the regression lines independently of the slope, and the rate of change of the slope is predicted by a sequential system.   When the change of slope ceases to be significant, the follow-up period is regarded as adequate, since further changes in the equations can be predicted by the independent prediction of the mean. This result seems to apply over the effective range of experience covered. Naturally the extreme values will not be covered, but the reliability of extreme measurements is itself in some doubt, due to the small numbers of very good cases, or cases where failure is "certain". Probabilities of failure between 10% and 90% seem to be met by this system.

(a) The results of treatment in "open" and "closed" Borstal Institutions have been examined. It appears that the treatment (and any other concomitants) of the "open" institutions results in a lesser risk of a failure than treatment in a "closed" institution. A large part of this result is due (and shown to be due) to the fact that the Borstal Reception Centres do an excellent job in identifying and sending the better risks to the "open" institutions. Not all the difference seemed, however, to be accountable to this fact. All risk categories emerged from the "open" treatment with about a 10% better chance of success than the same risk categories emerged from the "closed" institutions. This result was obtained by use of method (iii) above. (See Chapter V, paras. 128–46.)

(b) The duration of detention, so long as it does not diverge very far from the mean found in this study, does not seem to have any effect upon the likelihood of success. A period of detention of, say, 20 months seemed not to have any better results than a detention of, say, 14 months. This finding is not so firmly established as (a). If there is any gain in detention for the relatively long periods, it is clear that this advantage is small in so far as its juvenile therapeutic effect is concerned. (See Chapter V, paras. 147–56.)

(c) Persons making subjective judgments seem on occasions to take into account the right factors, but to give them incorrect weights, so much so that in one case it was shown that so much weight was given that a worse result was observed than if the factor had been given no weight at all. Impressionistic reports were shown to give rise to very considerable difficulties in interpretation—at least to those concerned with our field work. It was concluded that action was desirable to make impressionistic material, and subjective judgments in general, more communicable. (See Table 68 and Appendix I.)

(d) Definitions seemed to be uncertain in a large number of cases. (See Chapter V, paras. 12–18.)

(e) The longer the period for which a youth is able to be kept out of further trouble after discharge from a Borstal Institution the less likely is it that he will become a serious failure, if and when he should fail. Whether criteria of success or failure are taken as the simple fact of further conviction or no further conviction, or whether some attempt is made to assess degree of failure, the same system of prognosis seems to hold equally well. This seems to suggest a "general tendency" as measured by the experience tables. An analogy is seen with the concept of "general health", which when low predisposes individuals to attack by a variety of risks of infection. When the general resistance to crime is low, the likelihood of serious failure is greater and the greater is the risk of more failures. The prognosis seems to measure the general tendency and not any specific tendency in future crime. It has, therefore, a greater utility than if there were conflict between possible criteria. (See Chapter V, paras. 170–7.)

IX.5 In addition to the above items we have, throughout the report, made reference to things which might be done in the future. These references have been to specific items and made with regard to points specific to Borstal

studies. It is not our intention to repeat these detailed items here, but to take a more general view. In many respects we cannot be sure whether our experiences in this study would be similar were we to have attempted a similar exercise with data relating to other treatments. Where matters have seemed to be of general importance, we have still made our points with specific reference to Borstal.

RECOMMENDATIONS

IX.6 The difficulty in finding records which can be used for research purposes seems to us to spring from the difficulty of convincing people whose supreme interest is in individuals that objective data are so very much more valuable than impressionistic reports. Case workers feel cheated out of something if they are "restricted" in their comments. There is, of course, no reason why they should not make free comment in addition to objective noting of information, but the gleaning of information which may or may not be contained in the free style reports is always unsafe. Case workers' reports are certainly used for purposes other than research investigations, but in general the case workers never see the end products of their work—they never experience the difficulty of interpreting what they have written. They do not realise that their methods of reporting, and the things they consider worthy of note or not worthy of note, do not agree with other case workers. If they realise that differences exist, they usually believe that their method of reporting is best, and that others ought to cover the same ground and in other respects present material which is comparable with their own. Each case worker tends to have his or her own reference points. The problem seems to be to find a system which will retain the case worker's enthusiasm and his necessary individual approach and at the same time provide data useful for comparative studies and research investigations. It is not within the province of this report to suggest detailed methods to this end. It is however, questioned whether the free-style reporting, which can be shown to leave so little useful in research investigations, is, after all, so much better, as is claimed, than a more controlled system when used for purposes other than research.

IX.7 In the view of the authors, the data which are to be used either for research or administration should normally be recorded in the form in which they will eventually be used or as nearly as possible. Not only does this save time and money, but it gives the originator of the information direct access to the end user and uses. It is his material which is fed into the calculations, or upon which the administrator acts, and not a third party's interpretation. If the material has to be edited, coded or subjected to content analysis before it can be used, there is introduced a further stage from which error can arise. In these circumstances it is not the case workers' reports which are being used but some editor's views of what the case workers meant by the reports. The need for the narrative report to be passed through a further stage before it can be used for research purposes greatly reduces its power. The same is true of any other form of report which does not come directly from the field concerned in the form in which it can be used. This may mean that data for research purposes needs to be considered separately from data for administrative purposes. For example, the administrator may require a general subjective impression of the home conditions, and he will be able to utilise both what is said in the report and what he knows about who said it.

On the other hand other purposes demand reproducibility. In our case, for example, we need all case workers to report the same information in the same way, otherwise we should be faced with the impossible problem of making a separate experience table for each case worker.

NATURE OF RECORDS

IX.8 It may be helpful if a few observations were made on the nature of the records which might be required for research and administrative purposes. Data are of four categories of permanence and frequency:

    (I)   Those which are always essential for every case.

    (II) Those which it is sufficient to collect for a period only for every case.

    (III) Those which need not be obtained for every case but are required continuously.

    (IV) Those which need not be obtained for every case and are not required continuously.

There is, perhaps, a fifth case, namely data which are not really required at all, and this class has a tendency to recruit continuously from the other categories, mainly because the value and economy of the sampling systems of types (I), (III) and (IV) are not sufficiently appreciated. Any revision of the requirements for information might well start by questioning all items not in class (I). The reduction of the amount of data can only help in increasing the reliability of the remaining categories. It is generally believed that research workers require far more data than any one else, and that this is what makes research an expensive undertaking. This is not so. The research worker does not want data, but "information"; indeed large quantities of data can be a source of embarrassment. The term "information" is here used in its technical sense. It implies utility—in fact, the amount of information in data is the amount of useful information which they contain, or is a term indicating the "power" of the data. Until research is carried out the value within any data (the amount of information) cannot be estimated. Data which contain information look on the surface much the same as data which contain no information.

IX.9 The processes of efficient research may be seen as analogous in many ways with fishing. First a net is made and lowered to see what comes up; then the contents are examined and much is found to be useless; the mesh is changed and the depth of the drop is modified so that the amount of the fish required is maximised and the amount of other material and other fish is minimised. Often the first step of a research worker is to amass data. As soon as the tests have been completed, he can dispose of large quantities of data which yielded no appropriate information. Hence for research purposes sampling techniques offer an adequate and economic procedure. The different areas of interest to the research worker are better explored serially, with each project having a defined but limited scope and providing specific answers to specific problems. To attempt to cover continuously all data which might be useful for research purposes is not the best policy. The administrator should take over into his administrative records only data which the research worker has shown to be administratively useful. Thus we would suggest the minimising of continuously recorded information, with

focused research on specific problems from time to time. We may then sum-
marise what we have in mind (if we may change the analogy) as a continuing
"winnowing" and consolidating process.

DECISION METHODS

IX.10   In the collection of data we have suggested there is value to be
gained from a close liaison between the administrator and the research worker.
Each can be of help to each. Such collaboration also extends to the field of
research itself. Whilst there is doubtless scope for a form of "pure research"
in criminology, there is also a need for "operational research." The statisti-
cal approach is essential in both. As Lindley [1] put it in a recent paper, any
"experimental result, even in the purest branch of science, is a guide to future
action, and the function of statistics is to assist in deciding what this future
action shall be." It is futile to talk about "the best estimate" without
reference to the use to which the estimate is to be put.

IX.11   This is a new slant on the philosophy of science due mainly to Wald. [2]
Lindley [1] remarks, "I think that the emphasis on the idea of decision is
Wald's greatest contribution to statistical ideas". Most statisticians would
doubtless agree. In criminology, research with the emphasis on decisions
rather than on finding out things (particularly "causes") is certainly likely
to take us much further much faster. It is possible to take a decision problem
into the "statistical laboratory" and to work out a theoretical model which
will indicate how the decision is likely to operate in practice. This means
that new administrative decisions need not be taken in the dark (or light of
faith alone) but can be subjected to test conditions before application. An
example of this idea might make the matter more clear. In this study we
examined the success rate of boys of different risk categories to see how they
reacted when they were detained less than an average time in either "open"
or "closed" Borstals. This examination suggests a decision problem which
might have been phrased thus: "if we release boys from Borstal to licence
earlier than has been the custom, what would be the effect on the success
rate?" Or, "suppose we were to release only boys who had a good prognosis
earlier, would this be a safe procedure?" The statistical model has tested
these possible decisions in theory. It could similarly test many other such
types of decision problem. It does this without invoking any theory about
the "causes" concerned. Indeed "cause" is an unnecessary concept in the
whole of this part, at least, of the criminological field. Another decision
which was tested by statistical models in this study was one which might have
been phrased, "should we consider building more open institutions or more
closed?" The statistical model suggested that the success rate of the "open"
Borstals was, even with the most unpromising material, better than that of the
"closed" institutions. This answer does not enter the whole of this point in
the possible decision problem, but the model might be extended to cover them.
It is because we see great scope in the "decision" approach, by the statistical
construction of theoretical decision models, that we suggest that the admin-
istrator should be an essential collaborator in all or most criminological work.
We shall later discuss more complex decision models which have, perhaps, a
more realistic ring about them than those mentioned as illustration above.

DECISIONS AND THEORY

IX.12   Throughout this study we have taken as the objective the need to

obtain a best estimate of the probability of failure for each case. This should not be confused with the simplified model which involved the idea of obtaining the maximum number of cases "correctly" classified, this simple model, as we indicated, was inefficient since it took no account of probabilities except in two categories. There is, however, more in most decisions in the field of human behaviour than merely providing one "best" estimate. In chemical or industrial processes it is usually a simple matter of minimising costs of production or of maximising output, but here we may well be concerned with other things than the correctness of the estimate of risk of failure. It might, for example, be a far more serious thing to send a lad who is classified as a likely success to an "open" Borstal should he, in fact, fail, than it would be to send a lad classified as a likely failure (but who subsequently succeeds) to a "closed" Borstal. The administrator knows what decisions he has to make and also the importance of these decisions. The theoretical models of the decision problem might well need to include some consideration of the greater need for some decisions to be right than others. Development along these lines seems to be necessary. The methods exist. To illustrate this point we might take as a specific example a development of the decision problems we discussed earlier. At the moment we have considered only the success-failure rate as a basis for our statistical model decision to build more "open" Borstals. In this model we regard an error in classifying a success as a failure with the same weight as an error of regarding a failure as a success. This might not be a true model. It might well be more serious to classify a failure as a success than a success as a failure. This may be overcome by assuming that every "wrong" decision has a "penalty", and that the "penalties" attaching to some sorts of wrong decisions are greater than those attaching to other sorts of wrong decisions. Thus, although we may suggest that if all cases were sent to "open" Borstals (no matter what their prognosis) the success rate might increase, we might be more interested in increasing successes amongst the better type of boys, but regard the risk of absconding and committing further crime as too great a price to pay for an overall increase in the success rate if the bad boys received similar treatment. This problem could be solved by further experience tables including absondings, or we might attach other weights to certain classes of wrong decisions. Similarly in other fields in criminology the weights (degrees of importance) attaching to decisions might be objectively measured and taken into account. Alternatively, administrators might be able to assess the relative degrees of importance of different decisions. In either case we should not merely minimise the number of wrong decisions, but minimise the amount of harm that would be done by making a wrong decision; that is, determine the optimum decision taking both the effects of the decision as well as the probability of its correctness into our equations. The problem now is not HOW to predict, the methods exist—but WHAT to predict, and who shall formulate the problems.

FUTURE RESEARCH OBJECTIVES

IX.13 The lines to be taken by future research should, it seems, be determined mainly by the problems which are most pressing at the moment. There are no missing links in the chain of "pure research" in criminology which need first to be cleared. Indeed, it seems more likely that fundamental knowledge will best be gained, not by seeking it directly, but as by-products of

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research which is designed first and only to be useful. We should consider
both the value of the information and the cost of obtaining it.

IX.14   Our priority list of projects which arise from the present study are:

(i) Set up checking mechanism to maintain validity of tables produced
in this study (detailed suggestions below).

(ii) Follow-up the cases in this study for further trial period. (Data
exist, and this could be done very economically. Such a study would
produce evidence of the correctness of our conclusions about the
continuous nature of criminal tendencies.)

(iii) Carry out similar research to the present study, with the modifica-
tions suggested at the beginning of this chapter, into Home Office
Approved School boys (seniors).

(iv) Carry out a similar project with "young prisoners".

Projects (i) and (ii) are suggested as a means of extracting all the relevant
information from the present study. Projects (iii) and (iv) deal with a
similar or contiguous age group of lads which, by comparison with the present
study, would make both this study and those which might be carried out more
valuable than if research were done on an entirely different age range which
represented no continuity with this project, or on cases where the sentences
passed were very much less severe or very much more severe than those of the
present study.

IX.15   Since the first and second items on our suggested list of projects link
up directly with this study, we give some further details of the proposals
below.

CHECKING AND MAINTAINING THE VALIDITY OF THE PREDICTION TABLES

IX.16   The problem of maintaining the validity of the use of the experience
tables provided in this study, and the methods by which we suggest this might
be done, may best be explained by analogy with problems in industry where,
of recent years, statistical methods have been widely employed. During the
1939–45 war it was necessary to ensure that shells and other mass-produced
equipment did not fall below a certain standard. At the beginning of the
war the majority of firms relied on inspection systems to ensure the con-
tinuance of the quality of production. In many cases every item was
inspected for compliance with specification at various stages of manufacture.
This 100% inspection was both a time-consuming and wasteful procedure,
but no other methods of ensuring good quality were then known. By the
end of the war two basically different statistical procedures were being widely
employed. These procedures were regarded as so valuable and important
that the Ministry of Supply set up a special department to explain the methods
to manufacturers and to design and install the statistical schemes to meet
specific problems. These two methods were known under the general heading
of "quality control". The systems enabled the maintenance of quality to be
checked without 100% inspection and gave warnings of any deterioration of
quality far more quickly and effectively than the older and far more expensive
systems. The majority of the larger industrial firms now use these methods.
Both systems rely for their information on samples.[3] When these methods
are applied to test the running of a machine the results of the sample checks
are plotted graphically on a chart kept on the machine itself, so that informa-
tion is available where it is needed and immediately it is needed. Other

applications of the methods enable tests to be made on goods received—answering such questions as whether the batch is up to standard or not, and indicating whether the batch should be rejected or accepted within the minimum of time. For these latter problems a different system of sampling is used, since the inspector does not want to go on testing the batch longer than he need. He wants to know immediately his sample information has told him whether his batch of goods may be accepted or whether it should be rejected. He also wants to know all the time that the problem of acceptance or rejection remains in the balance so that he may continue his sampling, and continue to obtain his information which will enable him to make his decision to accept or reject. This latter system of sampling is known as "sequential sampling".

IX.17   This outline of industrial quality control methods is necessarily incomplete, but may be adequate to make the point we wish to make by analogy. IX.18   We wish to know whether the quality of the prediction equation may be accepted, and if so, we shall need to know from then onwards whether it is maintaining its quality at all subsequent dates. If it shows signs of falling off we want to know immediately so that we may "stop" and adjust the "machine" (i.e. cease to use the old equation and set about building another which restores the quality). Our position is thus the same as that of the industrialist. If he goes on making products which fall below standard they will have to be scrapped at a loss to the firm. He wants to know at the earliest possible moment when to suspect the output of any machine so that he can prevent it getting out of control. Quality control methods do just this for him. Very much study has been given to the statistical problems involved and we can take direct advantage of all the appropriate theoretical models. It seems likely that the efficiency of our system based on these models would be very high.

IX.19   The methods we might employ are, in fact, more powerful than those possible in industry. When an industrial inspector samples a batch of goods received, he samples at random from the batch. In our case we have shown that those who fail soonest are the worst failures, and thus the data which come to us for inclusion in the sampling processes are ordered in a manner which we can utilise in addition to the fact that the lad was or was not a failure within a given time, or we could consider different intervals of time between release and recommittal. The exact model which would provide the best estimate can only be derived after we have been able to make some estimates of the weight attaching to wrong decisions. If the chance of regarding a failure as a success is more serious an error than the reverse, then the limits set to the acceptance or rejection limits and the continuing control limits could take this into account.

IX.20   It might, perhaps, be said here that this method avoids the objection of the static nature of "experience". The sampling techniques we propose are continuing dynamic models, utilising experience continuously and at the earliest possible moment. If this project is not to become a relic of academic interest, some system along these lines is essential. Data arise all the time as by-products of the various administrative processes through which the individuals pass on their way to and from Borstal. The harnessing of these by-products should not be a very costly process. Once the scheme has been set up it can remain running with little cost. The processes are capable of being understood by machine operatives in industry and there seems no reason

why clerks should not be similarly able to carry out the work. The routine procedures continue until something goes wrong or shows signs of doing so. This means that the equations have broken down. But from what we can gather from other researches, there appears to be little chance of the system breaking down, unless administrative changes are made in the system which affects the types of lads who are sent forward for such treatment. In this case the equations would not be expected to hold.

IX.21   The setting up of such a continuing system should, however, not result in its being left running indefinitely so long as it shows no sign of breaking down. A manufacturer will consider replacing a machine which is still producing because it will be more economic to obtain another or because a better product might be turned out. It should always be borne in mind that it might be possible, when the data are better, to build an equation which would predict, not to a contingency of 0·45, but to some higher figure. When we can make such an experience table, we should set to work to do so—there would be no point in ensuring that no old equation was working to 0·45 if this blinded us to the fact that another system would work better.

IX.22   It should be said that this process, highly mechanical as it must seem to those skilled in individual case work, does not involve the lad himself in any way. The Borstal boy is not being subjected to these mechanical processes—the system is a check only on the validity of the prediction system. The use which is made of the prediction system has no such checking device.

AND THEN?

IX.23   When we have a continuously valid prediction table for Borstal, and tables relating to other treatments (e.g. prison, fine, probation, discharge), it would be possible to provide the Courts and others concerned with the disposal of cases with a useful tool. It would be possible, then, when a youth came before a Court, for the Court to be provided with information regarding the treatment most likely to be successful within the definitions used in this study. This would, of course, be additional information to that regarding the nature of the offence and all other information now obtained. The Court could be informed that if the lad were sent to Borstal he would emerge with an estimated chance of not being reconvicted of, say, $x\%$, that if he were put on probation, then the same chance would be $y\%$, and if he were sent to prison for a short sentence, the similar chances would be to $z\%$.[*] The Court could then decide whether the case should be given that treatment which was most likely to result in no further conviction, or whether other factors outweighed this view—whether it was justified to reduce the lad's chances of success in order that some other points of justice or social need might be met. It has to be borne in mind that the prevention of further crime, though one of the important objects of criminal justice, is not its only object. The quality of justice could not be strained by this additional information.

There is no reason why prediction should not be developed outside the field of recognised delinquency, so that it might become possible to identify the likelihood of boys (or girls) becoming delinquent in later years.[†] The early

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[*] On "study of effect of different methods of peno-correctional treatment": see, e.g., S. and E. Glueck, Juvenile Delinquents Grown up (New York, The Commonwealth Fund, 1940), Chapters XIII et seq.

[†] On "prediction of delinquency for non-delinquents": ibid., Unraveling Juvenile Delinquency (New York, The Commonwealth Fund, 1950), Chapter XX.

identification of potential delinquents is now regarded as one of the main tasks of the practical criminologist and educator. It might then be possible to link prediction tables with preventive as well as reformative measures.

The provision of information relating to risk should also be useful to the After-care Association both in order that they might appraise the value of their normal work and any experimental methods that might be evolved. The selection of the most appropriate form of after-care for each case is also likely to be brought within the area of possible study. Such studies would be closely analogous with our attack upon the problem of the value of "open" and "closed" institutions within the Borstal system. At the lowest level, the risk category would afford a challenge to the staff and, perhaps, even an additional incentive. A worker's case load could be assessed and discussed in terms of "difficulty".

We offer the tools we have made, but would like to say that, whilst a carpenter may do much with only a hammer and a saw, a complete armoury of tools is really necessary before the workmanship can be fairly assessed. We think we have found a way of making a set of tools of considerable potential value, but so far only one of the necessary set is made.

SUMMARY OF CHAPTER NINE

S.IX.1 The main results of this project are believed by the authors to lie in the field of methods. In summary these are:

(a) It has been shown that optimum weightings (with avoidance of overlapping of the counting) afford a better prediction instrument than the methods used in earlier studies.*

(b) The "unpredictable" group, which has resulted both in previous studies and originally in this project, is susceptible to further analysis and prognosis. Factors relating to personal differences may, *after the extraction of the more weighty factors relating to past criminality,* break up this centre group. In future studies this should be planned for and the studies designed accordingly.

(c) The utility of experience tables has been tested by "reflecting the results backwards" upon the procedures, events and treatments, and thus creating a quasi-experimental situation after and out of the normal procedures of criminal law and administration. Since real experimentation is almost impossible in the human field, this technique seems to have possibilities of development and wider application.

(d) A system has been worked out whereby long periods of follow-up may be found to be unnecessary, and by means of which, in any circumstances, it will be possible to test when (and to identify as soon as) the follow-up period has been adequate. This procedure also seems to have wide general applications.†

(e) It has been shown that the need to ensure that the experience tables remain up-to-date for prediction may best be arranged by a system of

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* That is, the solution of equations by separating the attributes from the variables and subsequently recombining into a single score, provides a simple system of prognosis combined with high efficiency.

† This method will be recognised as the application of a sequential method to multiple regression techniques.

continuous (and variable fraction) sampling. By this means the
fact that the prediction system may be "drifting" with changes due
to time trends will be noted immediately it occurs. The expense of
testing by reworking the tables at intervals may thus be avoided
together with the risk that the large-scale tests might not take place
until some time after the system had broken down.

(f) It has also been established that those factors which discriminate
between delinquent and normal populations do not always discrimin-
ate between classes of delinquent. This has a direct bearing upon
subjective judgments.

S.IX.2 If we might underline one finding, it would be that relating to the
period of follow-up. (Item d.) Although it has been possible to work out
this idea only partially, it has become clear that the amount of extra information
which extra time of follow-up might provide can be estimated, and the
follow-up curtailed when and *as soon as* the situation has become sufficiently
stable. This stability, it appears, is achieved much more quickly by the
consideration of the derived from direct consideration of the number
of extra cases which are likely to fail. By this means we again transport a
static model into a more dynamic one and gain information accordingly.[*]
S.IX.3 The other results of this project might have been expected or the
methods used more obvious. It is the value to be gained from viewing the
situation as a dynamic situation and designing the methods and models
accordingly which we would most like to be recognised as offering scope for
future research designs.

PRACTICAL FINDINGS OTHER THAN METHODOLOGICAL.

S.IX.4 Our conclusions in respect of results which do not emerge only as
methodological are more tenuous. This is mainly because of the difficulties
about the basic data. Those of immediate and practical importance which
may be fairly firmly established are:

(a) The results of treatment in "open" Borstal Institutions are more
often better than those of the "closed". A large part of this result
is due to the fact that the Reception Centres do an excellent job in
identifying and sending the better risks to the "open" establishments.
Not all the difference seems to be accounted for by the better material
upon which the "open" system operates, all classes of risk
emerged from the "open" Borstals 10% better than the same risk
categories emerged from the "closed".

(b) The duration of detention, so long as it does not diverge very far
from the mean found in this study, does not seem to have any effect
upon the likelihood of success. A period of detention of, say, 20
months seems not to have any better therapeutic value than a
detention of, say, 14 months. This is not firmly established, but if
there is any advantage in the longer periods of detention the gain is
very small.

(c) Persons making subjective assessments seem to take into account

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[*] This is in effect a system of predicting the origin of the regression lines independently
of their slope, and the rate of change of the slope is predicted by a modified sequential
system.

the right factors, but to give them incorrect weights, so much so that in one case so much weight was given that a worse result was observed than if the factor had been given no weight at all.

S.IX.5   Although some considerable study was devoted to subjective judgments, the difficulties of using these sorts of data were avoided rather than resolved.   This was because the need for reproducibility seems to be of major importance, and the better place for the exercise of judgment appeared to be after the use of experience tables rather than as part of them or before their use.   In the ways in which we found it possible to utilise intuitive assessments, they were found to be of small significance.   This finding has, however, limited scope and should not be completely generalised.

S.IX.6   For the purposes of the application of the methods of research and analysis used and proposed in this study, it is concluded that attempts should be made to render impressionistic reports more communicable.

S.IX.7.   It is also concluded that too much data can be an embarrassment both to administration and efficient research, and means are suggested for reducing the amount of data without loss of effective information.

S.IX.8   The use of 'decision theory' is recommended both as a research tool and as administrative aid.   The close co-operation between the administrator and the research worker is regarded as likely to result in valuable contributions to knowledge about offenders and their treatments.   In particular it is considered that administrators could give research workers further considerations of importance which should be accounted in their assessments and calculations.   The result of an experiment, even in the purest branch of science, is considered to be a guide to future action, and often the processes of research could be expedited by bringing the decision problem into *direct* association with the data, rather than for the data to pass through stages of theory and hypothesis formation divorced from likely or possible future action.

S.IX.9   The use of mathematical models which reproduce the likely effects of likely decisions, and which may be constructed on the basis of existing data, are recommended.   The variations in the natural, usual and everyday processes of administration of justice may be regarded as affording quasi-experimental situations after the event.

FUTURE RESEARCH

S.IX.10   It is not considered that there is any vital missing link in any theory of crime which needs first to be found or which should have priority of research.   Whilst "pure" research doubtless has a place in this field, it is considered that "operational" research holds out a good chance of providing the next major advance.

S.IX.11   Research merely for the sake of gaining knowledge—"pure research"—doubtless has a place in criminology, and it is not our suggestion that the freedom of the research worker to choose this aspect of research should be impeded.   We feel, however, that another approach which we may call the "operational research method", offers the greater likelihood of advance at the present time.   Progress in the operational approach need not wait upon any new theory or technique of analysis.   There are already too many theories which hold their own today only because they have not been tested, and many useful techniques are available.   As social scientists we see no reason why we should not accept, without inhibitions about "purity", the challenge of existing problems.

REFERENCES TO CHAPTER IX

(1) D. V. Lindley, "Statistical Reference". Paper read before Research Section of Royal
    Statistical Society (to be published in J. Royal Statistical Society, 1933 (B) 15).
(2) A. Wald, "Statistical Decision Functions" (1950, London, Chapman & Hall).
(3) B.S. 600 R. British Standards Publication.
(4) A. Wald, "Sequential Analysis".

APPENDIX I

Code List for Analysis of Case History Files

A. Codes taken from the Borstal Association Follow-up Records

Reference Number			

A1 — *Age at committal*

Years	Code
16	6
17	7
18	8
19	9
20	0
21	1
22	2
23	3

A2 — *Age at first finding of guilt*

Years	Code
under 11	Y
11	9
12	8
13	7
14	6
15	5
16	4
17	3
18	2
19	1
20	0
21	x

A3 — *Total number of appearances in Court resulting in finding of guilt*

Actual number written in
from 1–8. 9+ coded 9.

A4 — *Number of Court appearances resulting in fines*

Actual number written in
from 1–8. 9+ coded 9.

A5 — *Number of Court appearances resulting in penalties (other than fines)*

Actual number written in
from 1–8. 9+ coded 9.

N.B. (If choice of fine or imprisonment it was coded as fine under A4 above.)
(If fine and other committal was coded as penalty under A5 above.)

A6 — *Whether ever on probation*

Yes	Code Y
No	Code x

15

Reference Number		
A7	*Where he went on discharge*	
	Home Code 4	
	Forces „ 5	
	Other „ 6	
A8	*Job changes during licence*	
	If none Code 0	
	Code actual number up to 9.	
	Over 9 and under 12 Code x.	
	12 and over Code Y.	
A9	*Type of first job on licence*	
	Errand/roundsman/lorry driver's mate, etc.	9
	Labouring and other unskilled work	8
	No employment since school	7
	H.M. Forces	6
	Skilled trades in the building industry	5
	Other skilled trades	4
	Apprenticeships of any kind (bound)	3
	Others	2
A10	*No. of crimes after release on licence to 31st August, 1951*	
	(including taken into account)	
	Code actual number	
	9+ coded as 9	
	x=sent to prison	
	y=escaped and not recaptured	
A11	*Any evidence of drunkenness*	
	No Code x	
	Yes Code y	
	Number of convictions: Code actual number	
A12	*Period between leaving place of detention and first subsequent conviction*	
	No further crime	Code 9
	Less than one month	9
	4–6 weeks	8
	6–8 „	7
	2–3 months	6
	3–4 „	5
	4–6 „	4
	6–9 „	3
	9–12 „	2
	1–1½ years	1
	1½–2 „	x
	Over 2 years	y
A13	*Type of first crime*	
	This information was found in the police report.	
	Assault	1
	Robbery/larceny	0–£5
		£5–£50 } 2
		over £50

Reference
Number

Burglary   up to £5   ⎫
              £5-£50   ⎬ 3
              over £50 ⎭

Receiving/fraud/forgery	4
Sex offences	5
Wilful damage/breach of recognisance	6
Absconding from Home Office School	7
Others	8

A14   Governor's Prognosis

Don't know or uncodeable	Code	=0
Bad	,,	=4
Fair	,,	=3
Good	,,	=2
Very good	,,	=1

A15   Housemaster's prognosis

Don't know or uncodeable	Code	=0
Bad	,,	=4
Fair	,,	=3
Good	,,	=2
Very good	,,	=1

A16   What lad is doing at present date

Don't know or uncodeable	1
Free in no further trouble	2
Absence or charged with crime	3
B.O., P.O.A., and conditional discharge	4
Borstal licence revoked	5
Prison up to 1 year's sentence	6
Prison 1 to 3 years' sentence	7
Sentence over 3 years	8
In mental institution	9

A17   Type of first crime after discharge

Coded as for type of first crime item A13 on sheets
Also no crime coded 0

A18   Sentence on first crime after discharge

Does not apply or unknown	1
Any detention	2
Fined, B.O., P.O.A., and conditional discharge	3
Borstal licence revoked	4
New Borstal sentence	5
Prison up to 1 year	6
Prison up to 3 years	7
Prison over 3 years	8
In mental institution	9

B. CODES TAKEN FROM BORSTAL FILES

*Reference
Number*

B1   DATE OF ENTRY TO ALLOCATION CENTRE (i.e. Latchmere
House or Wormwood Scrubs)

The period covered by the study is 1st August, 1946,
to 31st July, 1947. Code in accordance with the
month. This information is usually found on the Court
order just inside the cover of the file.

CODE

August 1946	8
September	9
October	x
November	y
December	0
January 1947	1
February	2
March	3
April	4
May	5
June	6
July	7

(If before August 1946 Code 8 but compute
length of stay (item B12) from correct date
of committal.)

B2   RELIGION

To be found on outside cover of file.

Nonconformist	0
Church of England	1
Non-Catholic	2
Atheist	3
Catholic	4

B3   COLUMBIAN TEST SCORES (on cover of file)

Usually on the outside cover. May be verified by
reference to enclosure envelope.

Under 10%	0
10–19	1
20–29	2
30–39	3
40–49	4
50–59	5
60–69	6
70–79	7
80–89	8
90–99	9

(Illiterates in lowest score unless evidence to contrary.)

B4   BORSTAL TO WHICH ALLOCATED (i.e. to which first allo-
cated)

Borstal	06
Feltham	05

Reference
Number

	Portland	07
	Lowdham Grange	01
	Camphill	03
	Nottingham	04
	North Sea Camp	ox
	Hollesley Bay Co.	ox
	Usk	02
	Huntercombe	00
	Portsmouth	08
	Gaynes Hall	09
	Gringley	11
	Hewell Grange	12

B5   NATIONALITY

Found on home and school report form. This applies
to the place of birth.

	Eire	1 (including N. Ireland)
	Wales	2
	England	3
	Scotland	4
	Other	5

B6   STATUS

Found on home and school report form.

	Single	3
	Widow	2 (including divorced)
	Married	1

B7   PHYSICAL GRADE

State of general health (medical record).

Some physical defects	x
No physical defects	Y

B8   AGE AT FIRST CRIME (i.e. first recorded crime)

Under 11	Y
11	9
12	8
13	7
14	6
15	5
16	4
17	3
18	2
19	1
20	0
21 and 22	x

The date of first conviction will be found on the
police report, and that information in some report (also
in same report) should establish age at the first
crime committed, for example, a subject born in March
1929 and convicted of first crime in December 1942
would be 13 at the time of the crime.

Reference
Number

B9   TYPE OF FIRST CRIME

This information will be found in the police report.

Assault	9
Breaking and entering/robbery/larceny	
0–£5	3
5–£50	5
over £50	8
Burglary (9 p.m.–6 a.m.) up to £5	2
£5–£50	4
over £50	6
Receiving/fraud/forgery	7
Sex offences	1
Wilful damage/arson	'r
Absconding from Home Office School	x
Others/including breach of	
recognisance	0

If more than one code might apply to any one crime, use the code number which is higher, preferring numbers to letters.

B10   TYPE OF CRIME FOR WHICH COMMITTED TO BORSTAL

Code as above. Information appears on the order committing youth to Borstal.

B11   NUMBER OF CRIMES TAKEN INTO ACCOUNT WHEN COMMITTED TO BORSTAL.

(No: Taken into account, Borstal Institution crimes.)
Enter the number of crimes taken into account when facing the charges which resulted in the Borstal sentence. Actual number written in from 1–8. 9+ coded as 9.

B12   TIME IN BORSTAL TRAINING

This includes the time spent at the allocation centre of either Wormwood Scrubs or Latchmere House. The time to be coded is, therefore, the time between the date on the committal order and the date of release to licence—shown on the Borstal/History form.

Up to 12 months 4 weeks		0
13 months		1
14	,,	2
15	,,	3
16	,,	4
17	,,	5
18	,,	6
19	,,	7
20	,,	8
21	,,	9
22	,,	x
23 or more		Y

Reference
Number

B13   ANY MISDEMEANOURS IN BORSTAL

These are *usually* the red lak entries on the history form. Write in the number of such, including absconds, but excluding promotions to grades, which may also be in red. Actual number written in from 0–8. 9+ coded as 9.

B14   ABSCONDING FROM BORSTAL

Ensure that this information, like all other, relates to the Borstal form which we are considering. If a lad had absconded from his first Borstal and received a further sentence *because* which left away he committed further crimes, Code X applies. In all other cases write in the number of abscondings or *attempted* abscondings. Code 0 is no abscondings.

B15   LETTERS RECEIVED WHILST IN BORSTAL

This information will give us some measure of the lad's contact with the "outside world" whilst serving his training. A list of letters written and received will be found in most files. Count the number of letters received.

Number of letters received:

0–4	0
5–14	1
15–24	2
25–34	3
35–44	4
45–54	5
55–64	6
65–74	7
75–84	8
85+	9

No trace of letter record sheet x.

B16   LETTERS WRITTEN WHILST IN BORSTAL
Same treatment as above.

B17   GOVERNOR'S REPORTS

Governor's report at the end of the lad's stay in Borstal whether they think that he will eventually "make good" or not. Unfortunately, different Governors report in different ways, and we can only arrive at an assessment after reading the different styles. We cannot directly use the Governor's report. We want two interviewers to assess the meaning of each report as to its prognosis. You will be briefed on this method.

B18   HOUSEMASTER'S PROGNOSIS

As above. A five-point scale will be used for each assessment:

Bad	5
Poor	4
Fair	3
Good	2
Very good	1
No information	x
Uncodeable	0

Reference
Number

B19   LENGTH OF STAY AT LAST ADDRESS
This will be found generally in the police report or
may be in the Lady Visitor's report, or some other
place. This applies to the time that the youth has
lived at the address when he was staying or when he com-
mitted the crime for which he was sent to Borstal.
Time spent at other places as punishment for other
crimes does not count.

Since childhood	0
Less than 1 year	X
1–2 years	9
2–3 ,,	8
3–4 ,,	7
4–5 ,,	6
5–6 ,,	5
6–7 ,,	4
7–8 ,,	3
8–9 ,,	2
9+ ,,	1
No trace of informa-	
tion	Y

B20   ASSESSMENT OF HOME CONDITIONS
Best assessment available from police report or
Probation Officer's report.

Good	1
Fair	2
Bad	3
No information	Y
D.N.A.	X

B21   OCCUPATION OF HEAD OF HOUSEHOLD AT TIME OF CRIME
Information found on either home or school report.

No information traced	X
Not applicable	X
Unskilled (including roundsman or Forces)	
labourer	9
Skilled worker	8
Shop worker (not rounds)	7
Clerical grades	6
Professional/manager/technical	5
Supervisory (including chargehand and foreman)	4
Unemployed	2
Other H/wife	3

B22   SUBJECT'S LAST OCCUPATION
Found on home or school report.

Errand/roundsman/lorry driver's mate, etc.	9
Labouring and other unskilled work	8
No employment since school	7
H.M. Forces	6
Skilled trades in the building industry	5
Other skilled trades	4
Apprenticeships of any kind (bound)	3
Others	2

Reference Number		
B23	LONGEST PERIOD IN ANY ONE JOB	
	Less than 1 month	9
	4-6 weeks	8
	6-8 ,,	7
	2-3 months	6
	3-4 ,,	5
	4-6 ,,	4
	6-9 ,,	3
	9 months to 1 year	2
	1 year to 1½ years	1
	More than 18 months	0
	Not applicable	x (i.e. no employment since left school Code 7 as in item B22)
	No trace of information	Y
B24	AVERAGE DURATION OF JOBS	
	Average to the nearest figure in months taken. Actual average written in from 1-9.	
	10+ coded as	X
	No trace of information	Y
	Not applicable	0
B25	TYPES OF ACTIVITIES	
	Parents and school report, or on police or probation report.	
	No information	Y
	Items not specified below	9
	Cinema going	8
	Sports watching	7
	Sports playing	6
	Club/group activities organised kinds	5
	Reading/study and the like/night classes	4
	Constructive hobbies/collecting	3
	Looking after animals	2
	None (specifically stated)	0
	Where two or more are applicable, code the highest number code.	
B26	SCHOOL REPORT	
	Good, no evidence of truanting	1
	Good, but evidence of truanting	2
	Fair, no evidence of truanting	3
	Fair, but evidence of truanting	4
	Poor, no evidence of truanting	5
	Poor, evidence of truanting	6
	No information	Y
B27	LONE OR ASSOCIATED CRIMES (i.e. the crimes for which he was committed to Borstal) see police report	
	Leader of crime gang	1
	Associated	2
	Lone	3
	No information	Y

*Reference
Number*

B28   WHETHER ANY INSTITUTIONAL RECORD

    Do not include Home Office School

    Yes, several years   4
    Yes, short period   3
    None   1 or 0
    No information   Y

B29   HOW LONG AT HOME OFFICE SCHOOL

    None   0
    Under 1 year   1
    1–1½ years   2
    Over 1½ years   3

B30   ABSCONDINGS FROM HOME OFFICE SCHOOL. See Court order

    Actual number written in from 1–8.   9+ = 9

    None   0
    D.N.A.   x

B31   NUMBER IN HOUSEHOLD—All relations living in household including subject

    Actual number written in from 1–9
    10+ coded as   x
    No information   Y
    No family or institution   0

B32   FAMILY CRIMINAL RECORD

    No information   1
    Yes   2

B33   LIVING AT/WITH/HOME CONDITIONS

    Father and mother alive and living with   1
    Father and mother and siblings, i.e. brothers and sisters   2
    Father only (no mother)   3
    Father, stepmother   4
    Mother only, no father (unknown)   5
    Mother, stepfather   6
    Institution/H.M. Forces   7
    Lodgings/relations/in-laws   8
    No fixed abode   9
    No information   Y
    Wife and child/children   x
    Living alone in own house   0

B34   PSYCHOLOGIST'S ASSESSMENT OF PERSONALITY

    Very good   1
    Good   2
    Fair   3
    Poor   4
    Bad   5
    No information   Y

Reference
Number

B35   PSYCHOLOGIST'S PROGNOSIS
    Code as above, i.e. as in item B34.

B36   EDUCATIONAL STANDARD
    From psychologist's report.

Good	1
Fair	2
Bad	3
No information	Y

B37   WHETHER RECOMMENDED FOR BORSTAL TRAINING BY
    PRISON COMMISSIONERS

Yes	Y
No	x (includes no information)

B38   NUMBER OF SIBLINGS (excluding subject)
    Actual number written in from 0–9

10+ coded as	x
No information	Y

Codes B39–B42 give data on the town in which the boy was living
before the crime.

B39   Home town—Industrialisation index

001–009	0
010–019	1
020–039	2
040–069	4
070–099	7
100+	x
London area	Y
Don't know	9
Scotland	8

B40   Home town—Size of town by population

Under 10,000	1
10,000–19,999	2
20,000–29,999	3
30,000–39,999	4
40,000–99,999	5
100,000+	6
London	Y

B41   Home town—Rateable value per head to nearest pound

£1	1
£2	2
£3	3
£4	4
£5	5
£6	6
£7	7
£8	8
£9	9
£10	0
London	Y
Rural	x

Reference
Number

B42   *Home town—Rates in the £1*

15/-	5
16/-	6
17/-	7
18/-	8
19/-	9
20/-	0
21/-	1
22/-	2
23/-	3
24/-+	4
London	Y
Rural	x

B43   *Time when Borstal file was received*

In the first batch from the Home Office	1
Received on 23rd January	2
Received between 1st and 14th February	3
Received on 14th February	4
Borstal file not yet received.	0

APPENDIX II

Notes on the Statistical Methods

SIMPLE CORRELATION METHODS

Different systems have been used to express simple correlations with the following points in mind.

We have had to consider the need to compare our results with previous works, notably the Gluecks' "500 Criminal Careers". In these cases we have used the mean square contingency as, for example, discussed in Yule and Kendall "Introduction to the Theory of Statistics" (p. 68 of the 13th edition). This seems to have been the coefficient used by the Gluecks. The absence of numbers in some of their tables precluded any check that this was in fact always so. It seems that the formula for their coefficient was

$$C = \sqrt{\frac{\chi^2}{n + \chi^2}}$$

(see table p. 289)

We have preferred the formula

$$\sqrt{\frac{\chi^2 - d.f.}{n + \chi^2 - d.f.}}$$

Since the degree of freedom are usually small, the coefficients are usually comparable within quite small limits.

In other cases we have had continuous variables, and for obvious reasons we have then used the product moment correlation r where

$$r = \frac{a_{xy}}{\sigma_x \sigma_y}$$

This necessitated the use of a further coefficient to give comparability between our product moment correlation (used for continuous variables) and the coefficients used for dichotomies or other classifications. It will be realised that the product moment coefficient has limits of ± 1 whilst the limits for C or our formula including the degrees of freedom does not reach these limits unless the number of categories is infinite. The series tends towards the limits of ± 1 quite quickly, but not quickly enough for comparability in most of our tables. We have accordingly quoted a coefficient (indicated as $R\phi$) in some cases which makes correction for the restricted limits and restores the contingency coefficient reasonably comparable with the product moment. Readers who compare the product moment coefficients with the contingency coefficient $r\phi$ will not get an unreasonable impression of the differences in discrimination between continuous and discrete factors.

On another occasion we have had to use r biserial as the most efficient indication of the difference between two sets of data as indicators of success and failure.

χ^2 TESTS

In many cases where the correlations were small or for other reasons the meaning attaching to the table was regarded as unimportant we have calculated and shown only the χ^2 and the degrees of freedom on which this was based.

χ^2 is not a valid test where the expected number in any cell is less than 5. Accordingly, the pooling of small cells has often been necessary. The χ^2 and the degrees of freedom are quoted for the pooled table. In the majority of cases there was little or no room for variation in the pooling. In cases where alternative poolings might be made, the preference has been for those poolings which evened out the irregularities of the rows and columns. Other poolings were tested and in no cases were there differences of any significance.

Dichotomies are cuts made as nearly as possible to divide the scores of the rows and columns as equally as possible.

No account has been taken of the progression of signs in calculating the probability of y^2. We were not particularly interested in establishing the probability very precisely since the apparent precision might well be offset by the loss of information in some categories.

BASIS OF BUILDING PREDICTION TABLES

The general technique used was that of multiple regression. Solutions were worked out from matrices of correlations (rather than covariances) since the zero order correlations were required for other purposes in the report, and for the selection of the items to be included in the matrix to be worked. The weights were derived to two places of decimals and subsequently multiplied to integers before reproducing on the Hollerith cards and deriving the "experience tables". The integers were chosen to minimise the difference of the ratio between the original weights and the integer weights. The loss of information due to rounding may be expected to be negligible, especially in view of our findings given in Appendix III, where it is shown that even the utmost violence to the weights made no more than 2% difference to the precision.

It must be explained how multiple regression techniques were applied to attributes. The problem was attacked in two stages. We first considered all attribute data on its own, ignoring variables. The attributes were then weighted to provide the "best" estimator of the criterion and this equation was treated as a score and put into the variables matrix as a further variable. The result of the final solution was applied to the "score" and to the variables themselves to derive weights which were proportional to the original numbers and the approximations made to the nearest integer as mentioned above.

The "second" equation to which we have referred was derived by taking the centre group "X" (in our notation of p. 153) and repeating the process outlined above. The loss of data does not permit us to utilise these results, but the technique may be of use on other occasions.

Some specimens of the basic matrices are reproduced in the following pages. Where the system was simplified, the fuller matrix has been given.

CORRELATION MATRIX
VARIABLES—FIRST MATRIX

	Score	Age at first court	No. court appearances	Age at first crime	Longest job	Average duration	Criterion 1	Criterion 2	Criterion 3
Score (attributes weighted sum)	1	+43	+41	+43	+25	+21	+30	+25	+28
Age at first finding of guilt		1	+52	+88	+21	+19	+11	+17	+06
No. court appearances			1	+55	-10	-10	+22	+25	+23
Age at first finding of crime				1	+19	+16	-09	+15	+12
Longest duration of any job					1	+70	+15	+15	+12
Average duration of job						1	+15	+12	+14
Criterion 1 Success/Failure (discrimination)							1		
Criterion 2 (Number of crimes after release)								1	
Criterion 3 Job stability on release									1

Notes (i) This matrix was subsequently reduced by omitting factors which did not contribute information of significance.

CORRELATION MATRIX

Illustrating partition of Group X (centre group)(1)

Reference (2)	I.Q.	Stay at address	Occn. H of H	Subject's Occn.	Leisure	Lone crime?	Family record	No. of siblings	Criterion	
B3 Intelligence	1	—·18	—·04		—·12	—·08	+·13	+·18	+·23	60-99% (high)—rest (low)
B19 Length of stay at address		1	+·43	+·57	—·15	—·03	—·15	+·04	—·15	Since childhood—others
B21 Occupation of head of house			1	+·34	+·02	—·22	+·02	—·16	—·11	Unskilled—others
B22 Last occupation of subject				1	—·14	0	—·13	—·15	—·09	Unskilled—others
B23 Leisure activities					1	0	—·21	+·02	+·55	Loitering, etc.—others
B27 Lone or associated crime						1	+·09	—·20	—·07	lone—leader or associated
B38 Family criminal record							1	+·15	+·15	None—some record known
B38 Number siblings								1	+·12	0-3 siblings—larger families
A10 Criterion									1	None—some

Notes (1) This serves only as an illustration of what might be done. The correlations are based on too small numbers.
(2) Reference numbers relate to coding list given as Appendix I.
(3) Correlations are dichotomies as shown.
(4) Items with promising weights: Leisure activities. Occupation of subject. Intelligence.

CORRELATION MATRIX

Pre and post-Borstal Factors

	"Open" or "Closed" Borstal	Number of misdemeanours	No. of abscondings	Original failure score	Criterion
(1) "Open" or "closed" Borstal	1	—·11	+·10	—·24	—·15
Number of misdemeanours		1	+·55	+·46	+·20
Number of abscondings			1	—·04	+·14
(2) Original failure score				1	+·36
Criterion					1

Notes (1) "Open" Borstal weighted as unity, "closed" as 0.
Product moment correlation.

APPENDIX III

A Comparison of Systems of Weighting of Scores

We have claimed that the scoring weights derived from the mathematical systems used in this study are "best weights." The term "best" is a technical one having no other meaning than that the squares of the deviations (errors) of individuals' predicted placings by the system have been minimised. The minimising of the squares of the deviations might not necessarily be a materially better system in practice than the unit weightings used by previous workers in this field. There could, however, be no occasion where the unitary weights proved better than the optimum weights. It may be asked whether the optimum weights are so much better that they are essential to this type of work.

There is no method of ensuring that overlap of factors is accounted for, which at the same time does not automatically provide optimum weights. In our study a large number of factors which were given no weight at all in the final equation vanished from the system because of complete or almost complete overlap with other factors. Any check of the one system against the other would involve a subjective judgment as to which factors were given a unitary weight, and what others were omitted from the system, either because it was suspected that overlapping accounted for a large part of their contribution to the information which they appeared to give (on the basis of, say, the zero order correlation) or for some other reason. It is not, therefore, possible for us to compare the unitary weighting system as it might be operated in practice, since we do not know what sort of subjective judgments other research workers would make. We may only suppose that the subjective judgment resulted in the exclusion of all factors which overlapped completely, or almost completely so that they added nothing to the information of the set. We can then rework our system with unitary weights instead of the weights derived from the equations. We are thus giving to the unitary weighting system one of the main advantages of the optimum system before we make any comparison.

In order to make an empirical test of the effect of using simple weights we drew a random sample of 118 cases (using odd digits of the serial numbers) and recalculated the experience tables. Unfortunately, unitary weights could not be given to one quite important factor (the employment data). This was because we did not use any subjective classification of employment but recorded duration. The weights

TABLE A

A comparison of the distribution of unitary-weighted and optimum-weighted scores for pre-Borstal factors

Unitary weights		Optimum weights		
Score	No.	Score range		No.
0	0	0 —under 0		4⎫
1	0	0 " 11		8⎬12
2	0	11 " 17		29
3	10	17 " 22		28
4	18	22 " 28		19
5	29	28 " 33		14
6	22	33 " 39		4
7	25	39 " 44		3⎫9
8	9	44 " 50		2⎭
	Total 118	Total		113

APPENDIX IV

Headings from Current Borstal Files and Notes on Contents

Cover page: Location   Name
            Number   Columbian Test score
            Religion   Home visit (date(s))
            Visitor's name   Borstal to which allocated and date
            Sentence

Page 1   Photographs on reception and discharge

            Date of expiration of sentence or detention
            Date of expiration of licence
            Record of movements

Page 2   The medical record:

            State of general health (1 line)
            Physical condition (1 line)
            Is there full power in motion in joints and limbs? (space)
            Height
            Chest measurement
            Condition of lungs   (line)
                 „   heart   „
                 „   vision   „
                 „   teeth   „
                 „   hearing   „
                 „   other organs   „
            Class of labour and restrictions if any (1 line)
            Whether fit for
                 Free gymnastics
                 Ordinary physical drill
            Special maladies from which prisoner is stated to have suffered
                 (space for record)
            Mental condition (space with no prompted items but note reading,
                 "attention is to be particularly drawn to any abnormal mental
                 condition liable to prevent the prisoner from profiting by Borstal
                 training")
            Particulars of family history available (space)
            General remarks (space with note, "Any morbid physical condition,
                 deformity or peculiarity such as hernia, varicose veins, hammer
                 toes, etc. Only those should be recommended who are capable of
                 receiving education and instruction in a trade")
            Whether fit for Borstal training (1 line)
            Record of admissions and discharges
            Hospital record, giving date of admission and discharge with space for
                 "Cause of admission and result"
            Record of height and weight (for use at the Borstal Institution)
            Discharge, physical and mental condition (small space)
            Fitness for discharge

Page 3   Home and School report:
            Place of birth

Address of last place of residence, and whether home or lodgings
(space)

Address of parents (or next of kin) and their occupation

State whether parents are living

Employment since leaving school (lad's own account) (columns
headed—Name and address of employer, nature of work, Dates
from, to, wages, reason for leaving)

Personal description:

Married/single
Religion
Complexion
Hair
Eyes
Distinctive marks and peculiarities
Height

Particulars of service in H.M. Forces (if any) (space)

Whether detained in any Institution Industrial or Reformatory
School, Asylum, etc.). If so, give particulars as to time, licence,
etc. (space)

Record of offences and convictions

Particulars of offence resulting in revocation of Borstal licence

Page 4	Housemaster's opinion
	(blank page—no notes or further headings or prompts)
	Governor's and Medical Officer's opinion
	(blank page—no notes or further headings or prompts)
Page 5	Badge money
Page 6	Trade proficiency report(s):

Date of entry to party
Date of leaving party
Conduct (space)
Does he work steadily? (space)
Is he reliable when left to himself (space)
What can he do? (space)—but see below)
Would you expect him to earn outside? (space)
Why did he leave the party (if he did)? (space)
Signature of instructor
Record of report differs for each trade group, giving syllabus of the
course, and space for initials of instructor and date "when reasonably
proficient".

Page 7   History:

"All incidents worthy of note to be recorded in chronological order,
and those falling under the following heads to be denoted by an
index letter: B.A. Borstal Association. I.B. Institution Board.
M. Misconduct and punishment (to be entered in red). P. Petitions.
V.C. Visiting Committee. Letters should be entered on page 8."
Columns below this head not headed.
Index letter; date; particulars; remarks

Page 8   Record of letters written and received
Names and addresses, outward, date and initials of officer, remarks
inward, date received and initials of officer

Page 9   Information for the guidance of the Young Prisoners' Committee with a view to assistance on discharge

Name   Prison

Remarks by Chaplain:
    (a) Conduct (space)
    (b) Educational progress (space)
    (c) General (space)

Remarks by Medical Officer:
    (a) Health (space)
    (b) Whether fit for discharge (space)
    (c) General, as to constitution, character and disposition (space)

Remarks by Governor:
    (a) Conduct and industry (space)
    (b) Kind of work for which qualified (space)
    (c) Work desired (space)
    (d) Whether prisoner can obtain work by his own efforts (space)
    (e) Whether aided on previous discharge (space)
    (f) Prospects of employment (space)
    (g) General (space)

Decision of Young Prisoners' Committee
                  (space)
                            Signature of Chairman

Discharge report and assistance granted
Decision noted by { Chief Officer
                { Governor's Office
Date of discharge
Destination (space)
Employment found (space)

Subsequent history as shown by reports from Assisting Society or Agent
                            (space)

Page 10   General remarks by Governor on reception, based on personal observation as to character and temperament
Note below this heading "On subsequent receptions any additions or qualifications should follow in chronological order. Each entry should be signed, dated and state the prison at which made."
(Blank page follows with no further headings)
General remarks by Chaplain on reception
    (reference to notes above)
(Blank page follows with no further headings)
Copy of recommendation or medical report made to Governor

Page 11   Police report
Pro forma letter requesting:
    (1) A report on the circumstances of the offence
    (2) Particulars of place of birth
    (3) And as full information as you can give about
        (a) the person's previous history . . . (examples quoted)
        (b) The home circumstances . . . (examples quoted)
        (c) The general character of the person and companions
            (with sources quoted)

Page 12 Parents:

"What schools has he attended?" (space)

"Have you ever thought that there was anything wrong with his mind? If why and when."

"Record of occupations. As it is desired to obtain a complete record in respect of time since leaving school, please fill in the following, and state how the time during periods of unemployment has been spent." (7 lines headed "Name and address of employer; nature of work, duration, wage, cause of leaving.".)

"How has any spare time been spent?" (space 4 lines)

"Are you prepared to give him a home and supervision when he is again at liberty?" (This question should not be answered if he is on bail.) (space)

"What prospects has he of obtaining work?" (space)

"Can you or any other relations or friends in the neighbourhood or at a distance provide or obtain such work?" (space 5 lines)

"Names and addresses of any persons who can and would be willing to give further information?" (space)

Any further information which you think might be useful (space 8 lines)

<div align="right">Signature and address</div>

Page 13 Employers

Pro forma letter. Questions follow:

"The stated date of birth is ——. Is this correct?"

"Between what dates was he in your employ?"

"What were the wages and nature of employment with you?" (space)

"What was his general character as an employee especially with reference to timekeeping, efficiency and honesty?" (space)

"Why did the employment cease?" (space)

"Would you be prepared to offer further employment?" (space)

"Can you give any information as to the character of the home, the parents and associates and how the person in question spent his spare time?"*

"Can you give any other information which might be of use?"

Page 14 References

Pro forma letter; followed by questions:

"For how long has he been known to you?" (space)

"Will you kindly state the date of birth?" (1 line)

"What do you know of the person's general character and conduct?" (1 line)

"Has he been honest?" (1 line)

"Has he been industrious?" (1 line)

"How has he been earning a living and will you state the name and address of the employer?" (4 lines)

"What was the character of the home?" (4 lines)

"What sort of company does he keep?" (4 lines)

"Are there any relatives or friends able and willing to receive and help the person to obtain work when again at liberty?" (4 lines)

"Would the person be suitable for Borstal training, that is, would there, in your opinion, be any response to efforts calculated normally to teach, train and help?" (4 lines)

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* Not to be answered unless from personal knowledge.

Page 15   Probation

Pro forma letter followed by questions:

"Address" (space)

"Parents living?" (space)

"General character of home and relations with parents" (space)

"Whether parents are able to receive and look after the person in
   discharge" (space)

School life (if known)

"Name of school" (1 line)

"Standard reached" (1 line)

"General conduct" (1 line)

"Employment since leaving school"

Columns headed, "employer and address, kind of work, dates,
   wages, remarks"

Footnote, "If no work has been done or if there have been long
   breaks between jobs, please say how such spare time has been
   spent"

"Particulars as to habits, associates and general interests, occupa-
   tion of leisure time (e.g. whether in touch with Young People's
   Institutions)" (15 lines)

"General remarks" (3 lines)

"Whether a further period of probation is recommended" (4 lines)

"The nature of the work, if any, at which the person would be able
   to earn a living on discharge, or which appears most suitable"
   (4 lines)

Page 16   School

Pro forma letter.   Questions follow:

"Is the person known to your Authority, and if so how long has he
   been known?" (1 line)

"Will you please state the date of birth?"

"In what standard did he leave school?"

"Had he or she any special ability or defect of physique or intelli-
   gence which hindered educational development?" (3 lines)

"Has he been honest, sober, industrious and generally of good
   character hitherto?" (3 lines)

"How long has he been earning a living and when employed?"
   (3 lines)

"Can you give any information as to the character of the home,
   parents and associates and how spare time was spent?"
   (3 lines)

"Are there any relatives or friends able and willing to receive and
   help the person to obtain work when again at liberty?"
   (3 lines)

"Would it be a suitable case for Borstal training, that is, would
   there, in your opinion, be any response to efforts calculated
   normally to teach, train and help?" (1 line)

"Do you consider that a prolonged period of detention is un-
   necessary in this case?" (1 line)

"Would you kindly set out any further information which you
   consider to be useful and necessary?" (4 lines)

Page 17   Approved School

Pro forma letter.   Questions follow:

Date of birth

Date of admission (to Approved School) (space)

Reason for admission (space)
Date of leaving (space)
Dates of recall or readmission (space)

Personal characteristics:

Physical
Intelligence
General character (space)

Character of home:

Description of home surroundings (space)
Parents or Guardians (space)
Local friends or possibilities of help (space)

School character:

Schoolroom progress and attainments (space)
Progress in training departments (space)
General social life (space)

History since leaving school:

Jobs (space) (no headings)
General character (space)
Any offences (space)
Dates of visits paid by school officers with very brief report (space)

Assessment of character:

"To what do you attribute breakdown?" (space)
"Are you prepared to recall or re-admit to the School should the
   Court order?" (space)
"If not, what course of treatment do you suggest (e.g. probation,
   committed to Senior School, Borstal training, etc.)" (space)
"Reasons for this suggestion" (space)
"Will a representative be present when the case comes before the
   Court?" (space)

Page 18   Army reference (where appropriate)

Pro forma letter. Questions follow:

"Service in Army" (give dates)'
"Has he been discharged? If so,
        Date of discharge
        Cause of discharge"
"Assessment of military conduct" (space)
"Character in testimonial form" (space)
"Other information that may assist the Court" (space)

In addition to these standardised forms, the Allocation Centres produce a number
of their own pro formas to assist them and members of their staff. There is now
attached to each Allocation Centre a permanent psychologist and education officer.
Tests now include (at Latchmere House): matrices, abstractions, spelling, arith-
metic, mechanical aptitude, squares and verbal facility. The Education Officer
reports on reading ability, hobbies and ambitions and notes the participation in
voluntary activities at the Allocation Centre.

APPENDIX V,

Governors' and Housemasters' Reports

These reports were made immediately before discharge on licence. The Governors and Housemasters were given very free scope in what they did—just that their final reports on each youth. In fact, the form provided for these reports gave no guidance or direction as to the items which the Governors should consider—the form was a blank sheet of paper. Naturally Governors and Housemasters had their own points of view—some considered one factor to be important, whilst others did not consider it at all. In reducing the information in these two reports to statistical data, we were fortunate in that a carbon copy of the reports appeared in the files of the Borstal Division of the Central After-Care Association. Thus, in two different pairs of London there were to be found two sets of the same information. At the Borstal Association's headquarters one team of investigators did these reports the follow-up data from the Borstal Association records, whilst the abstraction of the information from the Borstal this was carried out at the Social Survey's head-quarters. It was possible, therefore, to instruct both groups of people to carry out the same task of interpreting the Governors' and Housemasters' reports, so that both groups were reading the same report quite independently. There was no way in which the investigators working on the Borstal files and those making their assessments on the carbon copies could cross-check their results. In order to make completely sure of independent working, the code reference numbers and the scale of assessment were different for the two groups. Only after the two sets were married up by the mechanical analysis could the results be compared.

No particular factor could be abstracted from either of these reports because of their general nature. Accordingly the two sets of investigators rated these reports as to how well or badly they reflected upon the chances or likelihood of success. A simple four-point scale ranging from very good to bad was used at the Borstal Association headquarters, and a category was provided for cases where the investigators considered the remarks of the Governors or Housemasters to be so general that they could not code them; whilst at the Social Survey headquarters a five-point scale ranging similarly from bad to very good was used with a similar category for uncodeable cases. Since the five-point scale presented more difficulties in classifying due to the finer gradings, it was considered that two persons reading and discussing the meaning of the report would together obtain a more useful interpretation of the information. If the data were ideal, then we should expect complete agreement between the two groups of interpretation subject to changes in the scale. If on the other hand the difficulties of interpretation could be overcome by using more experienced personnel i.e. better system of coding, we should expect the two assessors working together with a discussion of each case to yield better results than the one assessor working alone. We should thus get some indication of whether the cause of differences between codes or coding systems lay in the Governors' and Housemasters' reports themselves, or in weaknesses in the interpretation of these reports, or partly in both directions.

These reports represent subjective assessment techniques where freedom of style and content was completely unrestricted. The data were both obtained in unstructured ways and reported in completely free style, with neither Governors nor Housemasters being directed (or guided) in any particular way to consider any aspect of behaviour or attitude. They were at liberty even, perhaps expected, to include within their scope their total experience of the youth and to summarise this with their general knowledge of Borstal boys into one report. Without doubt Governors and Housemasters are the best placed to know the Borstal boy. Their contact

with him is continuous over a period of not less than 9 months. If subjective judgment could be a means of prognosis, these reports should represent the best material of its kind.

We show first, in Table 1, the cross-analysis of Governors' reports (as interpreted by our "better" system of interpretation—System A) with success and failure.

TABLE 1

Governor's report analysed by the criterion
(better system of interpretation)
(System A)

Governor's Report	Success	Failure	Total
Very good	25	12	37
Good	99	88	187
Fair	104	119	223
Poor	54	73	127
Bad	6	15	21
Uncodable	17	15	32
No information	21	72	93
Total	326	394	720

$\chi^2 = 11 \cdot 972$ for 4 degrees of freedom
P between 0·02 and 0·01
$r_b = 0 \cdot 152$

The correlation between prognosis and success-failure is very low indeed at 0·152* and could occur by chance in between 1% and 2% of random samples of this kind.

Housemasters would normally have reported first and the Housemaster's views would be before the Governor when he made his assessment. It is somewhat surprising, therefore, to find that a better prognosis would be derived from the Housemaster's report embodied by the Governor's later comment. The difference is, however, slight, as shown in Table 2.

TABLE 2

Housemaster's report analysed by criterion
(better system of interpretation)
(System A)

Housemaster's Report	Success	Failure	Total
Very good	35	12	47
Good	102	94	196
Fair	119	133	252
Poor	44	74	118
Bad	11	15	26
Uncodable	1	2	3
No information	14	64	78
Total	326	394	720

$\chi^2 = 19 \cdot 618$ for 4 degrees of freedom
P less than 1%
$r_b = 0 \cdot 204$

* The correlation coefficient may vary from −1 to +1, where +1 indicates complete agreement between two things and 0 indicates no agreement at all, while −1 represents complete and inverse agreement.

The Housemaster's prognosis correlates to 0·204 with success-failure, a result outside the 1% chance limits. The system of interpretation and the agreement between Governors and Housemasters form the basis for our next analyses. In Table 3 we show the cross-analysis of Housemaster's and Governor's reports (on the same lad) as interpreted by system A.

TABLE 3
Governor's and Housemaster's reports compared
(better system of interpretation)
(System A)

Housemaster's report	Very good	Good	Fair	Poor	Bad	Uncodeable	No information	Total
Very good	23	10	2	—	—	4	3	47
Good	3	122	52	5	—	3	1	196
Fair	1	51	131	36	3	15	10	252
Poor	—	1	31	74	5	4	3	118
Bad	—	—	—	12	13	—	1	26
Uncodeable	—	1	—	—	1	—	—	2
Total	37	185	223	127	21	32	30	*656

r = 0·76

* Excluding 4 cases of no information.

The agreement between the two reports is quite high with a correlation of 0·76. There is also a considerable degree of agreement evident between Governors and Housemasters when we consider the figures derived from the simpler system of interpretation although the correlation is lower, at 0·57 as shown in Table 4.

TABLE 4
Governor's and Housemaster's reports compared
(simpler system of interpretation)
(System B)

Housemaster's report	Very good	Good	Fair	Bad	Don't know or uncodeable	Total
Very good	137	49	6	—	3	195
Good	60	178	45	—	6	289
Fair	4	42	46	—	5	97
Bad	—	—	—	—	—	—
Don't know or uncodeable	—	1	—	—	2	3
Total	201	270	97	—	16	*584

r = 0·57

* Excluding 136 cases of no information.

We may also compare the two systems of interpretation directly with each other in respect of both Governor's and Housemaster's reports. These analyses are given as Tables 5 and 6 below.

TABLE 5

Comparison of systems of interpretation of Governor's reports

Governor's report System A	Governor's report (System B)						Total
	Very good	Good	Fair	Bad	No information	Don't know or uncodeable	
Very good	30	1			6		37
Good	95	59	4		28	1	187
Fair	41	127	16		25	4	233
Poor	8	45	51		20	3	127
Bad		5	15		1		21
Uncodable	14	10			8		32
No Information	13	23	11		41	5	93
Total	201	270	97		136	16	720

$\chi^2=138\cdot6$ for 2 degrees of freedom
P. less than 1%
r=0·682

TABLE 6

Comparison of systems of interpretation of Housemasters' reports

Housemaster's report System A	Housemaster's report (System B)						Total
	Very good	Good	Fair	Bad	No information	Don't know or uncodeable	
Very good	33	5			9		47
Good	100	67	1		28		196
Fair	49	139	25		39		252
Poor	3	54	40		20	1	118
Bad		8	15		3		26
Uncodable	1	1	1				3
No Information	9	15	15		27	2	78
Total	195	289	97		136	3	720

$\chi^2=145\cdot9$ for 2 degrees of freedom
P less than 1%
r=0·612

The agreement between the two systems of reporting is fair, at 0·68 and 0·61. There is no significant difference between thee two coefficients and we may assume that with both reports interpretation was equally difficult. There is clearly a difference between the two systems of interpretation. But the degree of agreement is about the average for such interpretation of subjective judgments. The "better" system of interpretation was more than six times as expensive to operate as the

simple system. If the reason for the failure of the Governor's and Housemaster's reports to provide prognostic information were due to the system of interpretation we should expect the system to give better results when tested against the criterion. We have already seen that Governor's and Housemaster's reports seem to agree more when interpreted by the "better" system, and we have noted coefficients of association ($r\phi$) of 0·15 and 0·20 with success-failure for these two reports when the same system of interpretation was used.

Tables 7 and 8 below show the simpler system of interpretation analysed by the criterion.

TABLE 7

Governor's reports analysed by the criterion
(simpler system of interpretation)
(System B)

Governor's report	Success	Failure	Total
Very good	112	89	201
Good	127	143	270
Fair	30	67	97
Bad	—	—	—
Don't know or unocodeable	4	12	16
Blank	53	83	136
Total	326	394	720

$\chi^2 = 10\cdot4$ for 2 degrees of freedom
P greater than 1% level
$r\phi = 0\cdot22$

TABLE 8

Housemasters' reports analysed by criterion
(simpler system of interpretation)
(System B)

Housemaster's report	Success	Failure	Total
Very good	115	80	195
Good	124	165	289
Fair	32	65	97
Bad	—	—	—
Don't know or unoodeable	2	1	3
Blank	53	83	136
Total	326	394	720

$\chi^2 = 20\cdot6$ for 2 degrees of freedom
P greater than 1% level
$r\phi = 0\cdot25$

We thus find that the Governors' reports when interpreted simply are significantly associated with success-failure at more than the 1% level. The coefficients of association (η̇φ̇) are

| System A | Governors | 0·13 | Housemasters | 0·20 |
| System B | „ | 0·22 | „ | 0·25 |

There is certainly no evidence that the expenditure of six times the effort on the function of interpretation produced any better result. This may be due to the fact that the single assessor was outstandingly good at interpretation and produced results better than the combined efforts of the two assessors working to a more elaborate procedure. But the single assessor was younger and, if anything, less experienced than either of the two assessors. All three assessors had passed the same selection procedure in the same score group and had been similarly trained in field research.

Whatever the reason, the simple direct interpretation agrees better with the known result than does the more complex ("better") system of interpretation. It is therefore, concluded that the failure of these reports to afford any valuable prognosis is not due to the interpretation systems but indicates that either the reporting system is at fault or the Governors and Housemasters do not possess any real degree of foresight into a lad's future. It may be that the "better" system failed because it was "reading into" the reports more than they possessed. We should, if this were so, expect the agreement between the two reports to be higher, but the prognosis to deteriorate, and this is, in fact, observed. The analyses are given in detail mainly as support for our attitude towards this kind of free-style report material.

There is, however, little doubt that the difficulties of interpretation could be overcome. This could only be achieved by requiring a much more objective and structured approach. Part of the trouble in utilising these subjective assessments lies in the nature of subjective judgment and only part in the particular system of reporting used.

APPENDIX VI

Copy of Interim Report on Validation

PRELIMINARY REPORT ON THE BORSTAL VALIDATION

Members of the Committee may be interested to know the results we have so far obtained from the application of the original scoring system to the cases which have so far come to hand from the 1948 sample.

Perhaps the most rigorous test of any prediction table is to use it for prediction! The test applied to the 215 cases so far received was to take the final prediction table (Table 90* to the original numbering) and predict the numbers of cases likely in the new sample. Table 90 uses both pre-Borstal and Borstal factors whilst for the validation sample it was possible only to secure information on pre-Borstal factors. The results expected from the validation are, therefore, set rather higher than we would expect to achieve. However, the two sets of figures compare remarkably well. In the tabulation below we show the expected numbers in each group and those actually observed.

A comparison of the prediction and the results

Group	Predicted		Observed	
	Successes No.	Failures No.	Successes No.	Failures No.
Top 20%	37	6	35	8
Next 20%	30	13	31	12
Centre 20%	27	16	20	23
Lower 20%	19	24	17	26
Lowest 20%	11	32	12	31

Such a difference might well be due to chance sampling variations and certainly augurs well for the final result when the residual 100 or so cases are traced.

The validation sample does not have the complex factor of variable periods of exposure. All cases were given the same period of testing and any failures occurring outside the standard testing time have been regarded as successes. In fact, only two such transfers have been necessary. The direct comparison thus avoids the complex of artefacts and statistical devices used to overcome the variable exposure time previously necessary, and serves to demonstrate, besides validity of prediction, the validity of the artefacts themselves.

To the original scoring system with the centre "unpredictable group" removed the validation study is equally as satisfactory. Combining the A and B groups because of the small numbers involved we observe 76% successes which compares with 75% on the prediction, and for the CD groups we find 36% successes compared with a predicted 31%.

We could not attempt any prediction for the centre group using information on leisure pursuits since these data were not available.

The validation sample to date received is less biased towards success than the original sample upon which the equations were based and it is gratifying to note that this fact has not affected the prediction.

August 1953

* Table 81 in present text.

APPENDIX VII

Copy of Form used for Validation Study

BORSTAL PREDICTION STUDY

Working in 1946–7 Borstal entries, it has been found that a system of classification according to likelihood of subsequently reforming or returning to crime seems possible. In order to check this, it has been decided by the Prison Commissioners to apply the "prediction tables" to all Latchmere House entries in the latter part of 1948—a total of about 300 cases being required.

In order that the "prediction score" may be calculated, the following information is required about each entry.

NAME .... BORSTAL NUMBER ....

BORSTAL TO WHICH ALLOCATED ....

DATE OF APPEARANCE ON CHARGE WHICH RESULTED IN BORSTAL

COMMITTAL ....

	PLEASE WRITE "YES" OR "NO"
Whether any evidence of excessive drinking (any charge of drunkenness, for example, or other reliable evidence)	_____
Whether ever on probation prior to Borstal	_____
Whether ever at an Approved School	_____
Whether ever fined (prior to Borstal)	_____
Was he living at home with parent or parents (at time of Borstal charge)	_____

Please give town in which living at time of Borstal crime below

....

What is the longest period he has stayed in any *one* job (i.e. with any one employer on one sort of work)

.... weeks .... months

Date of release from Borstal on licence _____

Date of reception at LATCHMERE HOUSE _____

SUMMARY OF CRIME RECORD

Number of appearances in Court (resulting in finding of guilt) prior to Borstal _____

Total number of offences committed _____

Number "taken into account" at "Borstal" trial _____

AFTER BORSTAL TRAINING

    Is there any record of further crimes after Borstal training?   _____

    IF YES, please give details

Date of Court finding of guilt	Crime committed

APPENDIX VIII

Notes on "Five Hundred Borstal Boys"

WHEN the present book was in galley, a study of Borstal Boys *discharged* from Borstal in 1941–1 was published by Mr. A. G. Rose entitled "Five Hundred Borstal Boys". Assuming an average period of detention of one year, this sample may be approximately related to intakes during 1940–3. Our own sample was thus some four or so years later, and did not enter the war period. It is interesting, therefore, to make what comparisons are possible.

Rose followed the Gluecks more closely than we have done and preferred subjective assessments to objective factors and he did not go on to produce any prediction tables. Comparisons are, therefore, tenuous. Like ourselves, he found nearly all the correlations between his factors and criterion lower than the Gluecks and, although he attributed this to the better quality of their data, we are convinced that the real reason was the greater homogeneity of the Borstal population. In Borstal we are trying to distinguish between people who are more alike than were the Gluecks in their Reformatory cases, and the correlations (if this is so) must essentially fail.

In the following table we give some comparisons with the reservation that these should be interpreted with great care.

Comparison of "500 Criminal Careers", "Five Hundred Borstal Boys" and this Project

Factor	'C' Values		
	Glueck	Rose	Present
Industrial habits	0·42		
Work habits		0·29	
Longest period in one job			0·19
Seriousness and frequency of pre-Reformatory crime	0·36		
Total number of pre-Borstal convictions		0·23	0·23
Mental abnormality on entrance	0·26		
Personality type		0·38	(insig.)
Psychologist's assessment of personality			0·23
Psychologist's prognosis			
Absconding		0·15	0·15
Frequency of offences in Reformatory	0·33		
Number of "reports"		0·24	
Misdemeanours (excl. absconding)			0·90

Groups of factors which are similar have been grouped, but unless there is some reasonable comparability, we have inserted the coefficients on a different line. Again both Rose and the Gluecks used a three-way classification for

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success and failure and coefficient C is affected by the number of categories.
There is, therefore, very little real comparison across the two studies. It
is, however, interesting to note that when Rose is dealing with the same
factors as ourselves, the coefficients are exactly similar, also where the items
were factual the Glueck's coefficients were higher than in both Rose's study
and ours. This could be due to better data but only to population
differences, as suggested above.

In addition to comparing correlations we may compare some distributions
arising from Rose's and our own study. To shorten the presentation
we give numbers for successes and totals with percentage successful. Again
Rose's work is not directly comparable with our own since he sampled at
the "output" stage and not the input. Thus he has no information about
cases who went into Borstal but who were not discharged from Borstal;
notably, for example, he had no information about cases which absconded and
committed further crimes resulting in prison sentence, nor of those who
absconded and were not traced. His method of sampling has other diffi-
culties since the period of detention is correlated with the risk of failure. His
sample of output may be biased (in comparison with input) towards the
better cases in a rising population. To make this clear, let us assume a very
simplified case (and perhaps absurdly so) since the principle remains true.
Assume that only two types of lad (good and bad) were detained for two
periods (1 year and 2 years respectively). Assume increasing thus:

Year		1	2	3	4	5	6	7
IN	Good	10	20	30	40	50	60	70
	Bad	10	20	30	40	50	60	70
OUT	Good		10	20	30	40	50	60
	Bad		20	10	20	30	40	50

Then, if we sample years 4, 5 and 6, at output we get $30 + 40 + 50$ good boys
and $20 + 30 + 40$ bad boys, that is 120 good and 90 bad. But the input was
equally good and bad. Similarly in Borstal at any time we may have different
proportions of good and bad. This may be merely an unimportant technical
point or it may be of some effect. With this and other reservations we com-
pare those few items where the definitions used by Rose were repeatable.

Number of Previous Convictions

Number	Rose		Current		% Success	
	Success	Total	Success	Total	Rose	Current
None	26	40 }				
1	54	91 }	107	283	57	59
2	76	144 }				
3	33	91 }				
4	14	44 }	106	254	35	42
5 or more	18	62	53	120	29	31
Totals	221	472	316	657	—	—

Religion

Religion	Rose %	Current %
Church of England	71	72
Roman Church	23	22
Non-Conformant	5	5
Others	1	1

Abscondings

Number	Rose %		Current %	
None	332	75	449	69
1	73 } 114	16	112 } 202	17
2 or more	41	9	50	14*
Totals	446		651	

* *See text below*

The excess found in the two or more abscondings category may well be due to Rose's method of sampling since persistent absconders may be transferred to prison or be sentenced to prison before detention in Borstal is complete. They thus appear in a sample which considers its frame to be the "input" end of the treatment, but not in one which treats the "output" as the basic population. Since Rose did not seek to predict he was free to decide which frame he would take, whilst we were not. We sought to predict for "input" and hence had to sample "input".

Misdemeanours/Governors' Reports

Number	Rose		Current		% Success	
	Success	Total	Success	Total	Rose	Current
None	129	223	132	223	58	59
1	39 } 79	79	71	141	50	50
2	28 } 223	81	40	88	50	45
3 or more	24	63	73	205	27	35
Totals	220	446	316	657	49	48

It is interesting to note that for none and one "Governors' report" and for none and one "misdemeanour" the samples are very similar and that the overall success rates are exactly similar. The difference is due to those cases where there were two or more "reports". Rose, however, includes "abscondings" with "reports", whilst we separated misdemeanours other than abscondings from the total number of reports. Comparison can, therefore, be made only at the dichotomy some/none (where agreement between the rates is noted) since it is very improbable that a lad would have absconded without having some other misdemeanour on his record.

For a very small proportion of his cases Rose was able to find information about "home contacts" whilst the lad was in the institution. This analysis is not strictly comparable with our attempt to use the records of letters sent and received since it uses a subjective rather than an objective basis. However, it is interesting to note that Rose found a slight tendency for those with "regular" "home contacts" to be more often successful. ($C = 0.16$).

Another interesting analysis with which we cannot make any direct comparison is Rose's interpretation of the Governors' and Housemasters' reports taken together. He interpreted these into two categories and derived a coefficient of 0.87 with his criterion. This analysis is a higher figure than was obtained by any of our systems of interpretation of either Governors' or Housemasters' reports. But we did not combine the two. It is interesting to note that in our case the better *system* of interpretation was based on a copy of the reports in the Borstal file whilst the worse *system* was based on the After-care files, and it was the worse *system* (i.e. After-care files) that produced the highest association with the criterion with $r\overline{q} = 0.25$. Rose apparently made use also of the after-care files. Whilst conscious bias in interpretation is ruled out in both cases it is interesting to speculate what the effect of unconscious bias might be. "Halo-effect" is a well-known phenomenon and it is very difficult to design experiments involving subjective judgments where its presence is not suspected. Again the agreement between our two systems of interpretation was low, and we do not know whether Rose could obtain the same result if he were to interpret again the Governors' and Housemasters' reports.

Further comparisons between the two works are impossible or meaningless, due to the basic differences in approach—Rose rejecting the idea of repeatability whilst we have accepted the necessity of repeatability as a matter of primary importance. Perhaps Rose is right in rejecting objectivity and precision.* We do not think so.

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* Rose, ibid., p. 19. "The assessments were *guided* by the following definitions, but these were not regarded as rigid categories."
  ibid., p. 108. "To collect and reconsider figures for those who possess a number of 'objective' characteristics is comparatively simple. But facts are 'largely meaningless' unless we follow up by making assumptions . . ."

LIST OF TABLES

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CHARTS AND GRAPHS

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